

MEDICAL CONGRESS — MEDIESE KONGRES, PORT ELIZABETH

21-26 June / Junie 1954

# South African Medical Journal



# S.-A. Tydskrif vir Geneeskunde

Organ of the Medical Association of South Africa

Blad van die Mediese Vereniging van Suid-Afrika

Incorporating the South African Medical Record and the Medical Journal of South Africa

Waarby ingelyf is die South African Medical Record and the Medical Journal of South Africa

Registered at the General Post Office as a newspaper

By die poswese as nuusblad geregistreer

Cape Town, 20 March 1954  
Weekly 2s. 6d.

Vol. 28 No. 12

Kaapstad, 20 Maart 1954  
Weekliks 2s. 6d.

## IN THIS ISSUE — IN HIERDIE UITGAWE

Editorial: Van die Redaksie

Cripple Care  
Kreupelsorg

Original Articles: Oorspronklike Artikels

The Conservative Management of the Anuria of Crush Syndrome

The Scope of Clinical Endocrinology

A Report on the Domiciliary Treatment of Tuberculosis of Bone and Joint in the Cape Western Area

Impressions of the British National Health Service

Association News: Verenigingsnuus: Cape Western Branch Annual Meeting; Cape Midland Branch Clinical Meeting.

Purchase of Instruments by Doctors Overseas

The Benevolent Fund: Die Liefdadigheidsfonds

Advisory Service for Doctors Visiting Britain

Reviews of Books: Boekresensies

Support Your Own Agency Department

Ondersteun u Eie Agentskap-Afdeling

Professional Appointments

Professionele Betrekkings

Dr. H. A. Moffat Fund

Passing Events: In die Verbygaan

Correspondence: Briewerubriek

(P. xxvii)

(Bl. xxvii)

(Pp. xxvii-xxx)

(Bl. xxvii-xxx)



## THE FIRST INGREDIENT IN BALANCED ANAESTHESIA

# 'INTRAVAL' SODIUM

trade mark

brand

THIOPENTONE SODIUM

An M&B brand Medical Product

the most convenient, effective and rapid agent for induction of anaesthesia, and for sole use in short minor operations requiring no muscular relaxation.

Manufactured by



MAY & BAKER LTD

MA1270

DISTRIBUTORS

MAYBAKER (S.A.) (PTY.) LTD

P.O. BOX 1130

PORT ELIZABETH

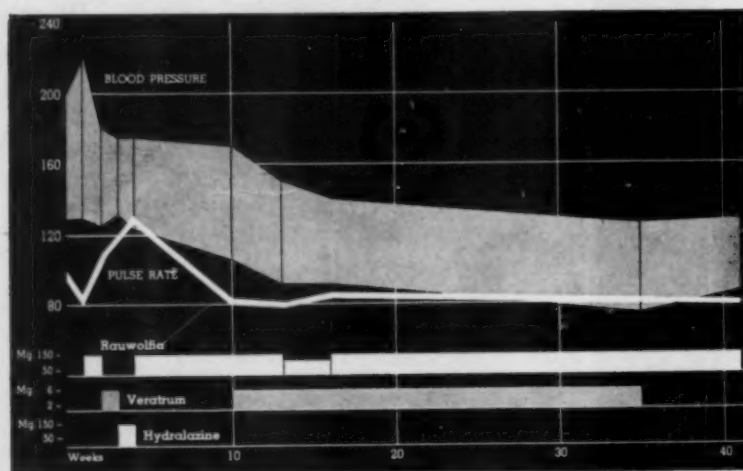
# RAUDIXIN

Squibb Rauwolfia

## Every patient with essential hypertension is a potential candidate for Raudixin therapy

Because of its safety and the stability of its hypotensive effect, Raudixin can be confidently prescribed for all patients with essential hypertension. It is especially recommended for the large, indeterminate group whose symptoms are not severe enough to warrant the use of other hypotensive agents. Critical adjustment of dosage is unnecessary.

In more advanced cases, Raudixin is a valuable adjunct to other agents.



This patient's blood pressure was lowered about the same amount by rauwolfia, veratrum or hydralazine. Hydralazine, however, caused undesirable reactions and increased the pulse rate. Veratrum augmented the effect of rauwolfia, and the effect was maintained even when veratrum was discontinued some months later. — After R. W. Wilkins, Ann. Int. Med. 37: 1144, 1952.

Raudixin contains the whole powdered root of Rauwolfia serpentina. The wide clinical experience to date still makes the whole crude root the preferred form of the drug.

### RAUDIXIN

Squibb Rauwolfia Serpentina  
50 mg. tablets. Bottles of 100.

### VERGITRYL

Squibb Veratrum viride fraction  
1 unit tablets. Bottles of 50  
also 10 cc. Multiple Dose. Vial  
1.5 units per cc. with Procaine  
Hydrochloride 1%

Further information and literature is available from

## PROTEA PHARMACEUTICALS LIMITED

7, NEWTON ST., WEMMER, JOHANNESBURG. P.O. BOX 7793. TEL. 33-2211.  
ALSO AT CAPE TOWN, PORT ELIZABETH, EAST LONDON AND DURBAN.

**SQUIBB**

'RAUDIXIN' IS A TRADE MARK

## High tolerance in massive Dosage

Salceetol permits high salicylate dosage, maximum gastric tolerance and replaces Vitamin C depletion.

### INDICATIONS

**Rheumatoid arthritis, lumbago, neuritis, osteoarthritis, etc.**

### EACH TABLET CONTAINS:

Sodium Salicylate	...	...	...	...	5 gr.
Aluminium Hydroxide	...	...	...	...	2 gr.
Ascorbic Acid	...	...	...	...	50 mgm.
Excipient	...	...	...	...	q.s.

BOTTLES OF 100 TABLETS

Literature and  
Samples on request

# SALCEETOL

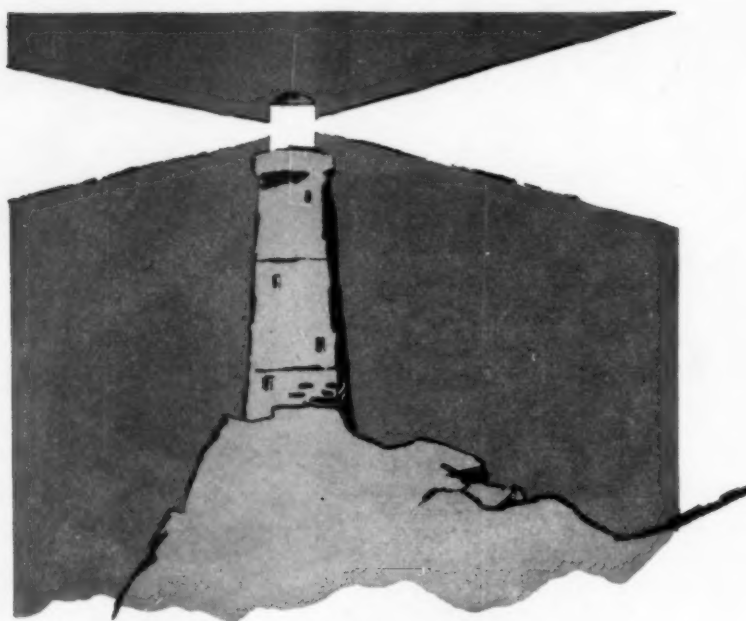
SAL-C-TOL

South African Distributors:

**WESTDENE PRODUCTS (PTY.) LTD.**

22-24 ESSANBY HOUSE, 175 JEPPE STREET, P.O. BOX 7710, TELEPHONE 23-0314, JOHANNESBURG  
 CAPE TOWN: 211 CTC Buildings, Corporation Street - - - - - Phone 2-2276  
 PRETORIA: 222 Central House, Central Street - - - - - Phone 3-3487  
 DURBAN: 66/67 National Mutual Buildings, Corner Smith and Gardiner Streets - - - Phone 2-4975





*in trachoma*

## Terramycin\*

BRAND OF OXYTETRACYCLINE

"In acute trachoma, proper treatment with Terramycin results, without exception, in a radical cure." Likewise, chronic trachoma responded, in 80% of the cases, to Terramycin therapy.

\*TRADEMARK OF  
CHAS. PFIZER & CO., INC.

Miloud, Y.: J. FACULTY MED. BAGHDAD 16:25, 1952

Distributor:  
PETERSEN LTD.  
P.O. Box 38, Cape Town  
P.O. Box 5785, Johannesburg  
113, Umbilo Road, Durban,  
South Africa

**Pfizer**

EST. 1849

*World's Largest Producer of Antibiotics*

"GRAM FOR GRAM TERRAMYCIN IS UNEXCELLED AMONG BROAD-SPECTRUM ANTIBIOTICS"

South African Medical Journal  
Suid-Afrikaanse Tydskrif vir Geneeskunde  
P.O. Box 643, Cape Town    Posbus 643, Kaapstad

Cape Town, 20 March 1954  
Weekly 2s. 6d.

Vol. 28 No. 12

Kaapstad, 20 Maart 1954  
Weekliks 2s. 6d.

CONTENTS — INHOUD

The Conservative Management of the Anuria of Crush Syndrome, C. C. Freed and Ian Macgregor	229	Work of the Service Described	244
Abstracts: Uittreksels	232	Association News: Verenigingsnuus: Dr. Lane Forsyth's Valedictory Address at Annual Meeting of Cape Western Branch	245
Editorial: Cripple Care	233	Meeting of Cape Western Branch	247
Van die Redaksie: Kreupelsorg	233	Cape Midland Branch Clinical Meeting	247
A Report on the Domiciliary Treatment of Tuberculosis of Bone and Joint in the Cape Western Area, J. J. Commerell, M.Ch.Orth. (L'Pool), F.R.C.S. (Edin.)	234	Purchase of Instruments by Doctors Overseas	248
The Scope of Clinical Endocrinology, S. Lopus, M.D. (Rand.), M.R.C.P., (Lond.), M.R.C.P. (Edin.)	237	The Benevolent Fund: Die Liefdadigheidsfonds	248
Impressions of the British National Health Service, D. Pottinger, M.B., B.Ch.	243	Dr. H. A. Moffat Fund	248
		Advisory Service for Doctors Visiting Britain	249
		Passing Events: In die Verbygaan	249
		Reviews of Books: Boekresensies	250
		Correspondence: Briewerubriek	251

*'Round  
the  
Clock*



Blades ... 3/9. pkt. of six

## B-P RIB-BACKS make it Easy

Stocked by all reliable  
Surgical Instrument Depots



**Easy** ON THE SURGEON because he is assured dependable blade performance by uniform sharpness—greater strength and rigidity.

**Easy** ON THE ASSISTANTS because dependable blade performance reduces time consuming delays detrimental to clocklike surgical procedure for the entire surgical team.

**Easy** ON THE BUDGET because the purchaser of B-P RIB-BACKS is assured proved cutting performance from every blade—and the maximum of satisfactory service ... thus reducing blade consumption to an economic minimum.

## GURR SURGICAL INSTRUMENTS (PTY.) LTD.

Harley Chambers                      Kruis Street  
Johannesburg                      P.O. Box 1562

# PREVENTION . . . .

## OF ATTACKS OF **Angina Pectoris**

### **Metamine**

tablets (Triethanolamine Trinitrate Biphosphate)  
prevent attacks of angina pectoris or greatly diminish  
their number and severity.

### **Metamine**

tablets have a duration of action 2-4 times that of Nitro-  
glycerin and are singularly free from side-effects and  
toxic manifestations.

For full information and literature write to

**KEATING'S PHARMACY LIMITED**

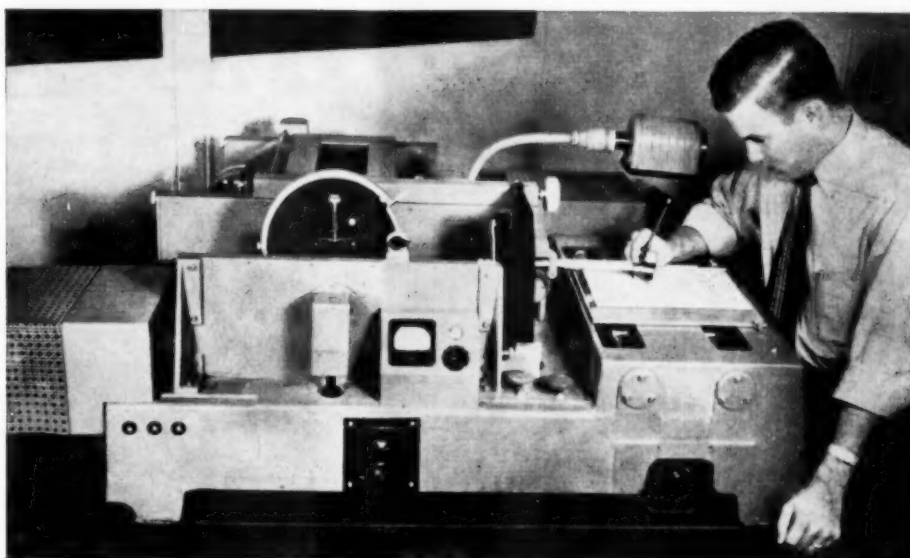
P.O. BOX 256, JOHANNESBURG

P.O. BOX 568, CAPE TOWN • P.O. BOX 2383, DURBAN • P.O. BOX 789, PORT ELIZABETH

BLUE BRAND FILM . . .

*Dependability*

ASSURED



*Before it is approved for shipment, Kodak Blue Brand X-ray Film must prove its uniformity. Hour after hour, day after day, strip samples of finished film are carefully exposed, processed, and tested in this recording densitometer.*

Every radiologist using Blue Brand Film receives the benefit of 63 years of knowledge, experience and skill in film manufacture—solid assurance of dependability and uniformity, promise of continuing improvement.

**KODAK (SOUTH AFRICA) LIMITED**

CAPE TOWN



JOHANNESBURG



DURBAN

---

*'Kodak' is a registered trade-mark*



## NULACIN

for the control  
of gastric acidity

### The key to successful Peptic Ulcer Therapy

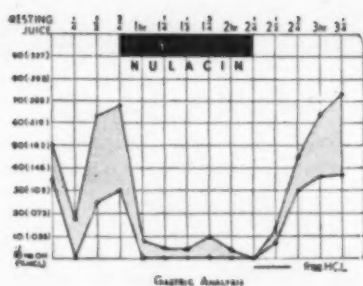
THE composition and unique manner of use account for the successful clinical behaviour of NULACIN. NULACIN TABLETS are indicated whenever continuous acid neutralization of the gastric contents is required: in active and quiescent peptic ulcer, gastritis, gastric hyperacidity.

#### DOSAGE

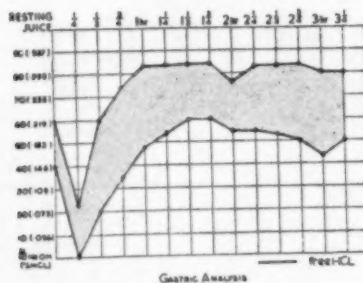
Beginning half-an-hour after food a NULACIN Tablet should be placed in the mouth between the cheek and the gum and allowed to dissolve.

During the stage of ulcer activity up to three tablets an hour may be required. For follow-up treatment the suggested dosage is one or two tablets between meals.

NULACIN Tablets are made by Horlicks Limited, Slough, England, and supplies are freely available through all wholesalers and retail chemists in South Africa and Rhodesia.



Superimposed gravel fractional test-meal curves of five cases of duodenal ulcer.



Same patients as in Fig. 1, two days later, showing the striking neutralizing effect of sucking Nulacin tablets (3 an hour). Note the return of acidity when Nulacin is discontinued.



## NULACIN

SOLE SOUTH AFRICAN DISTRIBUTORS:  
Professional Pharmaceuticals Limited,  
P.O. Box 2515, Johannesburg.

SOLE RHODESIAN DISTRIBUTORS:  
R. F. Oakley & Company (Pvt.) Limited,  
P.O. Box 438, Salisbury.

REFERENCES: Douthwaite, A.H., and Batty Shaw, A. *British Medical Journal*, 180-182, 26th July, 1952. Douthwaite, A.H. *Medical Press*, 195-199, 27th February, 1952.

*In Cardiology***'Hyperysin'**

HOMMEL

*for rapid and safe  
antihypertensive effect*

In the treatment of all manifestations of vascular spasm, it is now believed that papaverine nitrite has superseded the hydrochloride because of the latter's greater toxicity. Furthermore, the classically recognized value of nitrites in hypertension and the accepted sedative efficacy of papaverine are happily combined in the potentiated antispasmodic action of papaverine nitrite — the principal ingredient of 'Hyperysin.'

**COMPOSITION**

'Hyperysin' tablets each contain:

Papaverine nitrite	.. .. .	0.7 gr. approx.
Hexamethylenetetraminodichloralhydrate	.. .. .	3.0 gr. approx.
Carbromalum B.P.C.	.. .. .	3.0 gr. approx.

**ADVANTAGES****Low toxicity:** Papaverine nitrite is less toxic than papaverine.**Synergism:** The papaverine nitrite is synergistically potentiated by two other reputable sedatives.**Gradual effect:** 'Hyperysin' does not act so abruptly as the majority of nitrites.**INDICATIONS**

'Hyperysin' is a clinically proven agent in cardiovascular diseases manifesting arterial spasm and pathologically raised B.P.

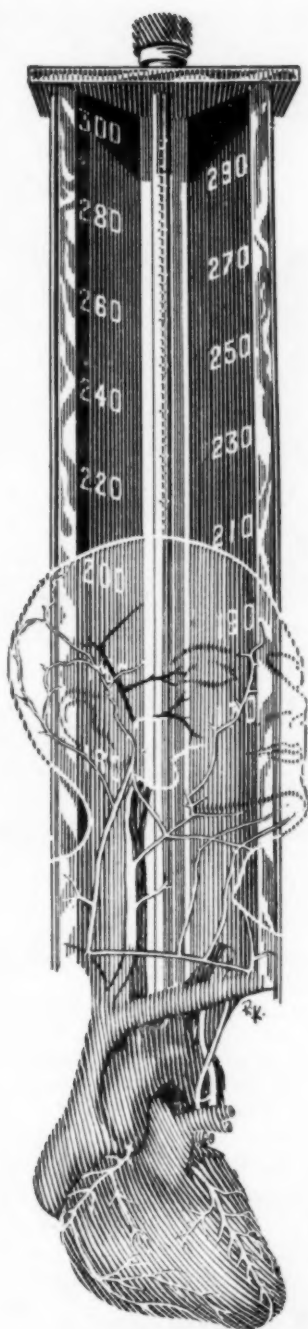
**Essential Hypertension****Angina Pectoris****Angiospastic Crises****Intermittent Claudication****PACKING:** Containers of 15 and 500 Tablets.**HOMMEL'S HÆMATOGEN & DRUG CO.**

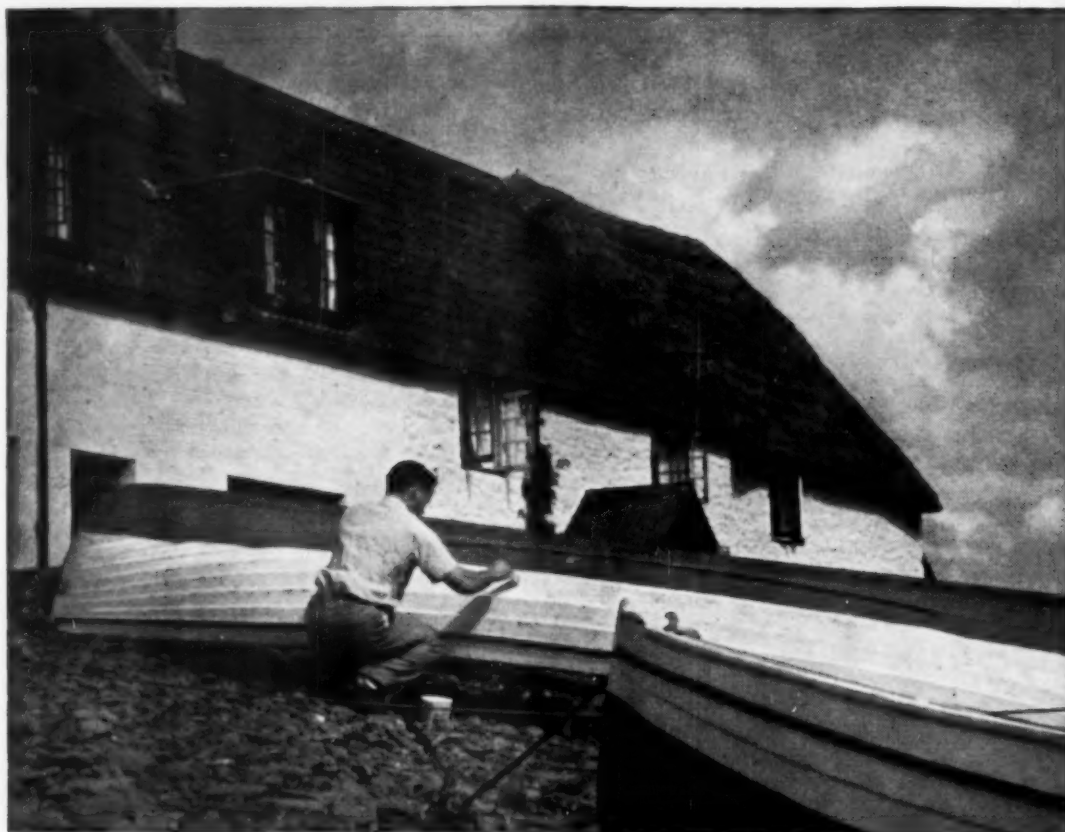
121 NORWOOD ROAD

LONDON S.E.24

*Our Sole Agents for SOUTH AFRICA:— Messrs. LENNON LIMITED*

P.O. Box 39. CAPE TOWN · P.O. Box 24. PORT ELIZABETH · P.O. Box 266. DURBAN, NATAL  
 P.O. Box 928. JOHANNESBURG, TRANSVAAL · P.O. Box 76. EAST LONDON  
 P.O. Box 1102. BULAWAYO, Southern Rhodesia · P.O. Box 379. SALISBURY, Southern Rhodesia

*Please Support Our Advertisers — Ondersteun Asseblief Ons Adverteerders*



## *Calm after Storm*

'MYSOLINE' is the new anticonvulsant that in clinical trials throughout the world has been shown to be of great value in the treatment of epilepsy.

A new series of papers which have appeared recently, confirm the high opinion of this drug formed from the early work; its powerful action in grand mal epilepsy has been emphasised, and there is evidence that it may be equally valuable in the psychomotor type. The small amount of work which has been done with 'Mysoline' in petit mal is encouraging.

### Notable Features:

- Low toxicity.
- Notable absence of hypnotic effect.
- Well tolerated in therapeutic dosage.
- Beneficial effect on the general behaviour, performance and sociability.

'Mysoline' tablets (0.25 gramme)  
are now available in packings of  
100 and 1,000.

# 'MYSOLINE'

trade mark

(5-ethyl-5-phenyl-hexahydropyrimidine-4:6-dione)



Pho4

**IMPERIAL CHEMICALS (PHARMACEUTICALS) LIMITED**  
WILMSLOW, MANCHESTER

(A subsidiary company of Imperial Chemical Industries Limited)

Distributed by:

**I.C.I. SOUTH AFRICA (PHARMACEUTICALS) LIMITED**

Pan-Africa House

75 Troye Street

P.O. Box 7796

Johannesburg

# South African Medical Journal Suid-Afrikaanse Tydskrif vir Geneeskunde

P.O. Box 643, Cape Town

Posbus 643, Kaapstad

Cape Town, 20 March 1954  
Weekly 2s. 6d.

Vol. 28 No. 12

Kaapstad, 20 Maart 1954  
Weekliks 2s. 6d.

## THE CONSERVATIVE MANAGEMENT OF THE ANURIA OF CRUSH SYNDROME

### REPORT OF A CASE

By

C. C. FREED AND IAN MACGREGOR

*Chamber of Mines Hospital, Johannesburg*

#### INTRODUCTION

Crush syndrome, the sequence of events seen clinically after ischaemic muscle necrosis, became well recognized during the intensive aerial bombardment of Great Britain (1940-1945) when many victims were buried for hours or days under fallen masonry and debris. The syndrome had already been partially described by Frankenthal;<sup>10</sup> the same condition was recorded after the Messina earthquake by Minami.<sup>18</sup> Crush syndrome has also been described following obliteration of flow through main limb blood-vessels, without any prolonged compression, as a result of traffic or other accidents, and from tourniquet pressure.

There have been but few reports of the syndrome following mining accidents (McLelland,<sup>16</sup> Caplan and Dunkerley<sup>5</sup>), and but few cases admitted to the Chamber of Mines Hospital, Johannesburg. We are therefore prompted to report a recently observed case.

The clinical picture<sup>3</sup> is fairly characteristic. As a rule the patient has been buried beneath fallen masonry and heavy debris and on release may appear well except for some swelling of the affected limbs and discomfort on using the muscles that have been crushed. After a latent period, which may last for several hours, the blood-pressure falls to severe shock levels. This is due to plasma loss into the damaged area, and it is accompanied by haemoconcentration and oedema of the limb. Sometimes the local circulation becomes impaired. Arterial pulsation is diminished or even lost and there are signs of incipient gangrene. Paralysis and patches of local anaesthesia may frequently be detected in the crushed members. The urine is strongly acid and contains

myohaemoglobin, albumin, creatine and casts. Intractable oliguria may develop. Later there are alternate apathy and anxiety, and vomiting occurs. The blood content of urea, potassium and phosphate rises. The critical period is the end of the first week, when the patient goes rapidly downhill and dies suddenly or begins to improve with the onset of a sudden diuresis. The mortality rate is between 60 and 90%.<sup>15, 12</sup>

Post mortem the kidneys are usually large, swollen and rather pale.<sup>4</sup> The capsule strips readily, leaving a smooth surface which may be mottled. On section the cut surface is wet, slimy and oedematous-looking, and the cortex is swollen and everted. There is sometimes a well-marked zone of pallor in the inner cortical region. The histological changes in the kidney appear to involve the whole nephron, but are most intense in the wide ascending limb of Henle, the second convoluted tubule and the collecting tubule. In these situations, constituting the lower nephron, there is intense catarrh, filling of the lumen with necrosed epithelial cells and hyaline and pigment casts, and polymorphonuclear leucocytic invasion. A similar histological picture is seen in cases of intravascular haemolysis, burns, heat-stroke, toxæmia of pregnancy and utero-placental damage, and may occur in sulphonamide intoxication. The cause of the renal damage is unknown; it has been variously attributed to toxic derivatives of myoglobin and haemoglobin, to toxins released from the injured site, to proteolytic enzymes released by injured tissues, and to disturbances of renal blood-flow.

Many forms of treatment have been used for the anuric phase of lower nephron nephrosis. Peritoneal lavage,<sup>9</sup> artificial dialysis by means of an extracorporea,

'kidney',<sup>13</sup> splanchnic block and renal decapsulation have all been tried with varying degrees of success.

Raymond Peters, commenting on the application of splanchnic block to this problem, states: 'It cannot be too urgently stressed that whatever, if any, value splanchnic block may possess, it should only be considered the key for unlocking the door to subsequent judicious treatment'. Styrons and Leadbetter carried out unilateral renal decapsulation in a case of this syndrome, and by means of ureteric catheters demonstrated that there was no difference in function between the two kidneys in either the acute or convalescent stage.

#### CASE REPORT

A White miner, aged 21, was admitted to the Chamber of Mines Hospital on 10 January 1953 at 9.30 p.m. He was working at the stope 'face' at 8.30 a.m. that day, when a rock burst occurred. He was buried in fallen rock and rubble. It appears that he was trapped in a sitting position, a mass of rock flexing his trunk forward on to his slightly-bent knees, with compression of the left thigh and right leg by more rock. Any attempts at movement on his part resulted in the settling of the rock on his already compressed lower limbs and on his bent back. So he remained for 9 hours until he was rescued. During the whole of this period he remained conscious.

The patient was seen at the hospital immediately on admission about 12 hours after the accident.

**On Examination:** Blood pressure 95/70 mm. of mercury. The skin surface was pallid and was moist with perspiration. There was a contusion of the skin over the right hypochondrium, and the back showed numerous linear abrasions. There was no deformity of the spine or pressure-tenderness to suggest vertebral fractures. Both lower limbs were painful to pressure. The right calf was tensely swollen, the ankle and foot also showing brawny oedema. The distal pedal pulses could not be felt. A patchy hypaesthesia to pinprick and light touch was found in the foot. There was some muscle power in the right ankle and foot, but severe pain on attempted movement precluded a full analysis of motor function. In the left lower limb the thigh showed tense antero-lateral swelling, while the calf, although hard and swollen, was not affected to the same extent as in the opposite limb. Urine had not been passed since the accident.

In this patient, as in most of the reported cases, there was no fracture, external wound or haemorrhage, but only abrasion of the skin and discomfort on using the muscles that had been crushed. The blood pressure had fallen to severe shock levels owing to plasma loss in the tensely swollen lower limbs. Circulatory impairment was evident in the right lower extremity.

**Progress.** The bladder was catheterized and 120 ml. of normal-looking urine withdrawn.

1,000 ml. of 5% dextrose-saline was administered by slow intravenous drip, followed 9 hours later by 1,000 ml. of 5% dextrose-water. Copious alkaline drinks were given as well. Ten hours later the blood pressure was 115/90 mm. Hg. The bladder was again catheterized and on this occasion 120 ml. of dark pigmented urine was obtained. On spectroscopic examination of this urine muscle pigments were not observed. The urine contained albumin, 5-10 erythrocytes and polymorphonuclears per high-power microscopic field, squamous and spheroidal epithelial cells and amorphous debris.

Sixteen hours after admission, and while fluid replacement was being continued, there was a drop in blood pressure to 95/70 mm. Hg. Repeated vomiting was by now a dominant feature.

Procaine hydrochloride (1,050 mg. in all) was administered with the intravenous fluids.

During the first 24 hours after admission 4,000 ml. of fluid was administered intravenously and by mouth, whereas only 360 ml. of urine was excreted.

We were faced with a serious situation presenting the following features: (a) Near renal shut-down, (b) a continuing state of shock due to trapping of fluid in the extra-cellular space, and (c) repeated loss of fluids and electrolytes in the vomitus.

During the second 24 hours only 240 ml. urine was excreted. In the same period the total fluid intake was 2,570 ml. and the loss

by vomiting 900 ml. At this stage we were in the dark with regard to the blood electrolyte pattern. The circulatory impairment in the right leg was more marked and gangrene of the right foot was imminent. There was complete paralysis of all the muscles of the right leg below the knee, and the left leg now showed an external popliteal nerve paralysis.

On the fourth day in hospital the posterior muscular compartment of the right leg was decompressed by wide incision of the deep fascia, the operation being carried out under spinal anaesthesia. The gastrocnemius and soleus bulged through the divided deep fascia. The gastrocnemius was of good colour, but the soleus and the deeper muscles were obviously ischaemic. An interesting feature was the improvement in vascularity of the soleus muscle a few minutes after the fascial decompression was done. A biopsy of the soleus was taken, and the histological features were those of ischaemic necrobiosis, the muscle fibres showing loss of striation and nuclei, and vacuolation. The circulation of the right foot definitely improved, but the total below-knee paresis persisted.

TABLE I

Day of Disease	Chlorides mgr./100 ml.	Sodium mg./100 ml.	Potassium mg./100 ml.	Urea mg./100 ml.	CO <sub>2</sub> Combining Power ml./100 ml.	Urine Output ml.
1.	—	—	—	—	—	100
2.	—	—	—	—	—	120
3.	—	—	—	—	—	100
4.	495 (as NaCl)	—	27.5	—	—	300
5.	425 (as NaCl)	—	30.0	—	—	300
6.	430	285	26.0	268	—	300
7.	450	310	29.4	380	44	1,700
8.	—	335	26.5	352	46	1,600
10.	—	304	22.0	348	39	2,700
11.	500	305	17.0	384	—	1,600
13.	580 (as NaCl)	310	24.0	284	—	4,100
17.	615 (as NaCl)	318	18.0	120	—	2,000
19.	—	—	—	73	—	2,500
22.	—	—	—	44	—	—
32.	—	—	—	25	—	—

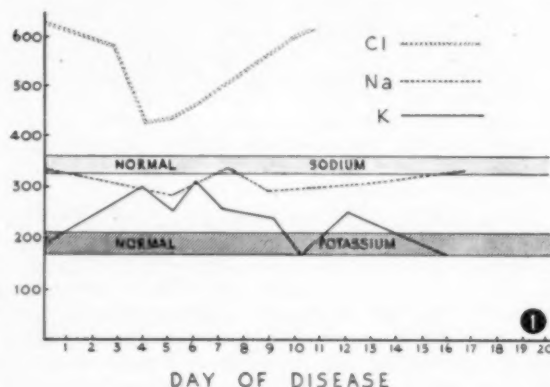


FIG. 1

Chemical blood examinations were started on the third day in hospital. Table I and Figs. 1 and 2 show the levels of blood urea, chlorides, sodium and potassium, the carbon-dioxide combining power and daily excretion of urine. The conservative treatment of Borst<sup>1</sup> and of Bull *et al.*<sup>2</sup> (see commentary) was applied at this stage. The features of interest are the progressive increase of blood urea, the hyperkalaemia, the hypochlorhaemia, and the hyponatraemia. The low chloride levels were associated with acidosis, which is probably explained by the inability of the kidneys in crush syndrome to manufacture ammonia, which spares the available bases of the body fluids. Probably also the kidneys fail to excrete acid radicles, mainly phosphoric acid and sulphuric acid; the base is thus increasingly fixed and the alkali reserve correspondingly

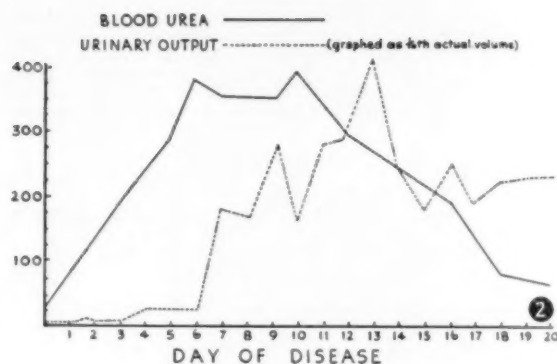


FIG. 2

decreased. The acidosis was manifested by hyperventilation, which was a marked feature in this case.

Hyperkalaemia is probably due to (a) cellular breakdown (in this case the breakdown of the crushed leg muscles), the potassium of the destroyed cells being added to the extra-cellular fluid at a rate at which it cannot be removed either by excretion or by transfer to cells; and (b) decreased renal excretion of potassium.

There were no definite symptoms which we could attribute to the hyperkalaemia (such as paraesthesias of the extremities and flaccid paralysis, or the cardiac effects and electrocardiographic changes, which are more characteristic.<sup>6</sup> In fatal cases the heart stops in diastole). Unfortunately no electro-cardiogram was done in this case.

There is a striking similarity in this case not only in the blood chemistry results, but also in the total clinical picture, to those reported by Darmady<sup>8</sup> in war casualties not involving crush injury. This emphasizes the fact that a common factor operates in all cases of post-traumatic anuria, viz. renal anoxia. The precise mechanism of its production is in doubt.

From the 11th day in hospital there was rapid return of the blood chemistry to normal levels, and the volume of urine was satisfactory. Clinical improvement preceded the improvement in the blood chemistry.

**Other Crush Injuries.** Up to the present, there has been no evidence of recovery from the external popliteal nerve palsy in the left leg.

In the right leg the soleus and all muscles deep to it underwent liquefactive necrosis. There was considerable purulent discharge from the posterior compartment of the leg with constitutional effects of deep suppuration. A marked anaemia, unresponsive to blood transfusion, developed. It was considered necessary to amputate the leg, and on 13 Feb. 1953 a below-knee amputation was carried out, the necrotic muscles being excised at their origins. The stump was dusted with chloromycetin powder and packed with gauze. The skin flaps were not sutured. Seven days later, under general anaesthesia, the gauze pack was removed. The wound appeared sufficiently clean to justify secondary closure of the skin flaps.

On 24 February there was a torrential secondary haemorrhage from the stump. The ensuing haemorrhagic shock was treated by adequate blood replacement. The popliteal artery was ligated and the haematoma was expressed from under the skin flaps. Later there was some exposure of the tibial stump, which was dealt with by means of skin traction applied to the stump. Good skin coverage was achieved and at the same time the flexion contracture of the knee was corrected.

Apart from the external popliteal nerve paralysis of the left leg, the patient is now quite well. He will probably require a Lambrinudi stabilization operation for the left foot. Renal function, as measured by concentration tests and urea clearance, is now quite normal.

## COMMENT

We are of the opinion that in the early management of this case we failed to recognize certain important

principles. These have been ably presented by Bull, Joekes and Lowe,<sup>2</sup> who stress that in anuric uraemia the following factors are most important: disturbances of water balance, disturbances of mineral balance and disturbances of nitrogen balance.

**Water Balance.** Many workers have appreciated the importance of water balance, and Lattimer,<sup>11</sup> reviewing the treatment of 33 cases of urinary suppression, found that of patients given less than 2,000 ml. of fluids a day none died, whereas of those given 3,500 ml. of fluids or more, 75% died. He sums up: 'The body is not analogous to a tank into which water can be forced until it finally bursts out through the kidneys.' In anuric patients, in the absence of vomiting, water loss is limited to extra-renal routes, i.e. lungs, skin and faeces. Under normal conditions this loss is 600–1,000 ml. a day. The fluid intake in anuric patients should accordingly be limited to 1,000 ml. a day.

**Mineral Balance.** Though electrolyte disturbances are significant, it is considered that they are less important than disturbances of water balance. In the absence of diarrhoea and vomiting the body has no effective pathway for electrolyte excretion other than the kidney, and administration of electrolytes in anuria may lead to gross disturbances of electrolyte balance. Bull *et al.*<sup>2</sup> were uncertain of the importance of excess or deficiency of chloride and bicarbonate and found it impossible to correct anion deficiency without at the same time introducing excessive quantities of cation. All their cases of protracted anuria had considerable disturbances of chloride and bicarbonate balance, but this did not prevent the onset of diuresis. For this reason they recommend an electrolyte-free regimen until diuresis starts, and no attempt is made, while the patient is still anuric, to correct the electrolyte disturbances. During the diuresis accompanying recovery, electrolyte loss may be considerable and must be replaced quantitatively.

**Nitrogen Metabolism.** The end products of protein metabolism other than urea, are possibly toxic. Further, accompanying the breakdown of tissue and most protein-containing foods, potassium and possibly other toxic substances are liberated. For these reasons it is desirable to depress endogenous and exogenous nitrogen metabolism as far as possible. It has long been known that a high carbohydrate intake depresses endogenous nitrogen metabolism. Developing this theme, Bull and his co-workers fed their anuric patients on an emulsion containing glucose 400 g., peanut oil 100 g., sufficient acacia to emulsify, and water to 1 litre. This 2,500 calorie protein-free and mineral-free diet is administered through a permanently indwelling stomach-tube by drip method throughout the 24 hours. All vomit is collected, filtered through lint and returned to the stomach in the same way. This ensures that the fluid intake is accurate, that there is no loss of food by vomiting, and that no loss of electrolytes occurs through vomiting. Serious disturbances of electrolyte balance during the anuric phase may be readily avoided by this regime.

By contrast, however, when diuresis starts, it brings with it special difficulties in management, because the electrolyte-regulating function of the kidney recovers slowly. Urinary losses of the various electrolytes must

be made good quantitatively, and, to the basic intake of 1 litre of water, fluid is added daily in a volume equal to the urine passed during the preceding 24 hours. When the urine output exceeds 1 litre a day the drip-feeding is discontinued and superseded by a low-protein diet.

Because anaemia is known to lead to diminished renal function, fresh packed red cells are transfused if the haemoglobin concentration is below 70%.

When we were fully aware of the gravity of the problem facing us in this case, we applied these principles in the treatment of our patient with the result already described.

Recently Milne *et al.*<sup>17</sup> confirmed the improvement in prognosis of cases of anuria or severe oliguria due to acute tubular necrosis, when the conservative regimes of Borst<sup>1</sup> and Bull *et al.*<sup>2</sup> were followed. This they attribute to the elimination of pulmonary oedema as a cause of death. A further problem, viz. cardiac arrest from hyperkalaemia, remains to be solved. Milne *et al.*<sup>7</sup> have applied to this problem the use of ion-exchange resins. They describe their experience with a sodium sulphonic resin in the treatment of 5 cases of anuria or severe oliguria complicated by hyperkalaemia, and outline a scheme for treating anuria with resins.

#### SUMMARY

A case of crush syndrome is presented.

The biochemical pattern of the blood is illustrated.

The physiological basis of the treatment of the anuria is stressed.

Our thanks are due to Dr. C. J. Goedvolk, Medical Superintendent of the Chamber of Mines Hospital, for permission to publish this case, and to Mr. J. A. Douglas, Mr. G. T. du Toit and Mr. Clifford Thomson for their help and encouragement in the treatment; and to Sister J. C. P. Smit and her staff for their excellent nursing care. We are indebted to Miss A. Andrews for her accurate secretarial work.

#### REFERENCES

1. Borst, J. G. G. (1948): *Lancet*, **1**, 824.
2. Bull, G. M., Joekes, A. M. and Lowe, K. G. (1949): *Lancet*, **2**, 229.
3. Bywaters, E. G. L. and Beal, D. (1941): *Brit. Med. J.*, **1**, 427.
4. Bywaters, E. G. L. and Dible, H. J. (1942): *J. Path. Bact.*, **54**, 111.
5. Caplan, A. and Dunkerley, G. E. (1945): *Lancet*, **1**, 147.
6. Darmady, E. M. (1948): *J. Bone Jt. Surg.*, **30B**, 309.
7. Discussion (1942): *Proc. R. Soc. Med.*, **35**, 321.
8. Finch, C. A., Sawyer, C. G. and Flynn, J. M. (1946): *Amer. J. Med.*, **1**, 337.
9. Fine, J., Frank, H. A. and Seligman, A. M. (1946): *Ann. Surg.*, **124**, 857.
10. Frankenthal, L. (1916): *Virchows. Arch. Path. Anat.*, **222**, 232.
11. Glen, A. M. (1941): *Brit. Med. J.*, **2**, 875.
12. Kilduffe, R. A. and de Bakey, M. (1942): *The Blood Bank and the Technique and Therapeutics of Transfusion*. St. Louis: C. V. Mosby Co.
13. Kolff, W. J. (1947): *New Ways of Treating Uraemia*. London: J. and A. Churchill, Ltd.
14. Lattimer, J. K. (1945): *J. Urol.*, **54**, 312.
15. Lucke, B. (1946): *Milit. Surg.*, **99**, 371.
16. McClelland, J. C. (1941): *Canad. Med. Assoc. J.*, **45**, 332.
17. Milne, M. D., Hughes Jones, N. C. and Yellowlees, H. (1953): *Lancet*, **2**, 791.
18. Minami, S. (1923): *Virchows. Arch. Path. Anat.*, **245**, 247.

#### ABSTRACTS : UITTREKSELS

Miller *et al.* (1953): *Practical Prescription Procedures in Vitamin Therapy—A Preliminary Report*. *J. Dent. Med.*, **8**, 90.

Forty patients were the subjects of this study, which aimed at throwing additional light on the role of vitamin preparations in dental and periodontal therapy. Seven products were used: Theragran, Vitamin A capsules (50,000 units), Basic Formula Tablets, Ascorbic Acid Tablets 250 mg., Rutorbin Tablets (20/100), Desiccated Liver Capsules, and Rutin Tablets 60 mg. From the point of view of oral therapy the objective sign best improved by vitamin treatment was gingival bleeding. Theragran was highly effective here, with 19 out of 24 patients with this condition improved following use of this preparation.

It would appear that there is a nutritional factor in the etiology of the more severe instances of gingival haemorrhage. Gingival colour, tone, and enlargement also responded to vitamin therapy. Of the 23 patients with neurologic and psychologic symptoms (e.g., fatigue, irritability, anorexia, sleep impairment, headache, peripheral neuritis), 19 (83%) improved with vitamin therapy alone. Subjectively, patients quite regularly had an improved sense of well-being after vitamin treatment, and less malaise or fatigue.

It is interesting to note (1) that in cases where vitamin therapy was withdrawn original symptoms reappeared and again disappeared with resumption of vitamin treatment; and (2) that a programme of vitamin treatment including both crystalline vitamins and desiccated whole-liver in high dosage yielded best results, both subjectively and objectively, for nutritional deficiencies. The authors conclude that (1) vitamin therapy is beneficial in cases of marked gingival bleeding; (2) therapeutic doses of a multi-vitamin product plus desiccated whole liver for a minimum of 10 days are indicated for dental patients with oral manifestations of nutritional deficiencies coupled with fatigue, irritability, anorexia, sleep impairment, headache, or peripheral neuritis; (3) a periodontal condition

may be expected to improve on vitamin treatment to the extent that vitamin deficiency is a factor in the cause of the condition.

Becker and Maslon (1953): *Evaluation of Tubeless Gastric Analysis*. *New Engl. J. Med.*, **249**, 68.

In this study a series of 90 determinations of free gastric hydrochloric acid were made on 88 patients by simultaneous testing with both intubation and tubeless techniques. Results indicate excellent agreement between the two methods, and the authors recommend the tubeless method for routine qualitative determination of free gastric hydrochloric acid because of its convenience and high degree of accuracy. No patient in the study suffered any discomfort which could be attributed to the tubeless procedure. Diagnex (synthetic quinine-bearing resin) was used for the tubeless technique tests.

The procedure was for the patient to fast on the morning of the test, with the morning urine sample used as the control blank. A gastric tube was employed to remove the fasting gastric contents for analysis; a half hour after injection of histamine diphosphate, gastric contents were again withdrawn for analysis and the tube removed. After urinating, each patient received 2 g. of Diagnex with water. Urine samples (each being a complete voiding) were taken 1 and 2 hours after the administration of the resin.

Normal examination of the gastric contents was made and compared with the results secured on analysis of the urine samples, according to the technique of the tubeless method, which involves ether extraction of the alkalized urine, extraction of quinine from ether by sulphuric acid, and a viewing of the sulphuric acid solution in ultraviolet light for comparison with standard quinine solutions. More than a trace of quinine indicates free gastric hydrochloric acid.



*Specify*

**LHC**

The standards set for London Hospital Catgut are above those of the B.P. Codex and the U.S.A. Pharmacopoeia.

This fact, plus an elasticity of approximately 40%, affords the Surgeon safety when using the fine sizes required by modern technique. We recommend B.P.C. sizes 2/0, 0 and 1 for general surgery and 3/0 and 4/0 for fine work.

## **LONDON HOSPITAL CATGUT**

is made by The London Hospital (Ligature Dept.) Ltd., London, E.1., England.

Sole Agents for South Africa and Rhodesia: **PETERSEN LTD.**

P.O. Box 38, Cape Town

P.O. Box 5785, Johannesburg  
113 Umbilo Road, Durban

P.O. Box 2238, Salisbury



## *Bloodless revolution*

The introduction of 'Dextraven' has made available for the first time a dextran solution with controlled optimal molecular content. It produces rapid elevation and prolonged maintenance of blood volume and normally ensures that over 50% of the dextran administered remains in the circulation after 24 hours—a longer period than has been possible with any previous blood volume restorer.

'Dextraven' is the preparation of choice for the restoration of blood volume. The British Encyclopedia of Medical Practice (Medical Progress, 1952) states "... it will revolutionise supportive therapy, and may be regarded as one of the major advances of the year."—Truly a bloodless revolution.

# Dextraven

TRADE MARK

Developed by research at

**Benger Laboratories**

# South African Medical Journal

## Suid-Afrikaanse Tydskrif vir Geneeskunde

VAN DIE REDAKSIE

### KREUPELSORG

Suid-Afrika moet met 'n gedugte kreupelsorgvraagstuk afreken. Meer as 50,000 kreupeles, waarvan die meerderheid nie-blankes is, het behandeling nodig. Die sorg waaraan hul behoefte het kan onder twee hoofde ingedeel word, nl.: (1) geneeskundige behandeling, wat hoofsaaklik die verantwoordelikheid van hospitaalowerhede, die mediese en verplegingsberoep en die hulpdienste is, en (2) maatskaplike sorg, insluitende spesiale opvoeding, vakopleiding, orderstand vir nood-druftiges ens. Daar is 'n groot behoefte aan inrigtings—beide hospitale vir genesende of hulp-dienste en ander inrigtings vir die nasorg en huisvesting van kreupeles.

Op die oomblik is die voorsiening vir geneeskundige behandeling en maatskaplike sorg ontoereikend maar as gevolg van die werksaamhede van die Nasionale Raad vir die Versorging van Kreupeles in Suid-Afrika, sy voorgangers en takke in verskillende dele van die land is daar definitiewe vooruitgang op hierdie gebied.

Die geskiedenis van die Nasionale Raad is 'n uitmuntende voorbeeld van die invloed wat ingeligte geesdriftiges op medies-maatskaplike probleme kan uitoefen. Bykans 30 jaar gelede is 'n beweging in Kaapstad begin om in die skreiende behoeftes van die kreupeles te voorsien. Vooraanstaande name verbonde met hierdie beweging is dié van mev. H. C. Horwood, baanbreker op die gebied van kreupelsorg asook op ander gebiede, lady Michaelis, edelmoedige skenker van 'n ortopediese hospitaal, dr. Pieter Moll en dr. Pieter Roux, leiers op die gebied van ortopediese chirurgie, wat albei in die fleur van hul lewe oorlede is. Gisterk deur die ondersteuning van H.K.H. prinses Alice het hulle en hul medewerkers in die begin hoofsaaklik hul kragte gewy aan 'n veldtog vir hospitale vir gebrekklikes. Terselfdertyd of liewers vroeër is 'n parallelbeweging deur die Kindersorgvereniging begin deur die stigting van die *Invalid Children's Aid Association* wat 'n tehuis vir kreupel kinders opgerig het.

Elders in die Unie is soortgelyke bewegings begin nie slegs deur vrywillige liggame nie maar ook deur hospitaal- en gesondheidsowerhede en mediese skole. Dit was 'n tydperk van aansienlike bedrywighede. In 1937 was 'n Kreupelsorgvereniging in die Kaap-provinsie gestig; dr. G. R. Girdlestone het die Unie besoek en 'n ortopediese opname gemaak; in 1938 het lord Nuffield 'n bedrag van £100,000 geskenk, en in 1939 is die Nasionale Raad vir die Versorging van Kreupeles in Suid-Afrika gestig.

Die Nasionale Raad\* deur sy provinsiale takke en in samewerking met die sentrale, provinsiale en plaaslike

EDITORIAL

### CRIPPLE CARE

The cripples in South Africa constitute a problem of great magnitude. More than 50,000 are known to be in need of attention, of whom the preponderant number are non-Europeans. The care they need falls under two main headings, viz. (1) medical treatment, which is primarily the responsibility of the hospital authorities and of the medical and nursing professions and the auxiliary services, and (2) social care, including special education, vocational training, relief of indigency etc. Much institutional accommodation is needed, both by way of hospitals, where the main consideration is curative or ameliorative treatment, and other institutions, where the main consideration is the provision of a home and after-care for cripples.

In neither of these respects is the available provision sufficient for the needs. However, definite progress has been made as a result of the work of the National Council for the Care of Cripples and its predecessors and branches in various parts of the country.

The history of the National Council is an excellent example of the influence that can be brought to bear on medico-social problems by enlightened enthusiasts. Nearly 30 years ago a movement started at the Cape to cope with the crying needs of cripples. With this phase are prominently associated the names of Mrs. H. C. Horwood, that pioneer in cripple care and other fields, Lady Michaelis, the generous donor of an orthopaedic hospital, and Drs. Pieter Moll and Pieter Roux, those leaders of orthopaedic surgery, both struck down in their prime. These and their co-workers at first devoted their attention largely to the campaign for hospitals for cripples, and in this they were helped by the support of H.R.H. Princess Alice. A parallel movement was started about the same time, or rather earlier, when the Child Life Protection Society founded the Invalid Children's Aid Association, which also was successful in establishing a home for cripple children.

Similar activity followed elsewhere in the Union on the part not only of voluntary agencies but also of the hospital and health authorities and the medical schools. A time of considerable activity ensued. A cripple care association was established at the Cape in 1937; Dr. G. R. Girdlestone visited the Union on a survey of the orthopaedic position; in 1938 Lord Nuffield made his gift of £100,000; and the next year the National Council for the Care of Cripples was established.

The National Council\* through its provincial branches and in co-operation with central, provincial and local government and the voluntary agencies interested in

\* Sien du Toit, G. D. (1954): *The Cripple Problem from the National Point of View*. S. Afr. T. vir Geneesk., 28, 114 (6 Februarie)

\* See du Toit, G. D. (1954): *The Cripple Problem from the National Point of View*. S. Afr. Med. J., 28, 114 (6 February).

regerings en met vrywillige liggame wat in die versorging van kreupeles belangstel, neem die voortou in die ortopediese stryd. Die Raad het meer fondse elke jaar nodig en met die doel voor oë word 'n Paasseeëlfonds-insameling jaarliks gereël.

Die afgelope jare het die waarde van plaaslike klinieke vir kreupeles openbaar. Ortopediese verpleegsters in die personeel van die kliniek versorg pasiënte nie net alleen by die klinieke nie maar ook by hul huise. Weens die tekort aan inrigtings is laasgenoemde diens van spesiale belang. 'n Artikel deur dr. J. J. Commerell oor die onlangse ontwikkeling op die gebied van tuisbehandeling vir ortopediese pasiënte verskyn in hierdie uitgawe van die Tydskrif (bladsy 234).

Die vooruitsigte van die stryd is belowend. Net soos in die geval van longtering kan toring van die bene en gewigte verhoed word en kan met vertroue na 'n afname in gevalle in die nabye toekoms uitgesien word.

Daar is ander oorsake vir die ontstaan van gebreke—elk met sy eie probleme en vooruitsigte, maar vir gebreke wat deur toring veroorsaak word het die vooruitsig, afgesien van die fundamentele kwessie van algehele voorsorg, verbeter. Ortopediese chirurgie en sy spanmaat ortopediese verpleging kan gebreke en ongeskiktheid wat deur toring veroorsaak word beperk indien nie geheel en al verhelp nie, en as gevolg van onlangse ontwikkeling op die gebied van been- en gewrigs-chirurgie is die vooruitsigte selfs meer belowend. Dit staan in die teken van die tyd dat die Universiteit van Kaapstad 'n leerstoel vir Ortopediese Chirurgie ingestel het. Die wapens in die stryd teen verminging is gereed. Dit berus nou by die volk om die organisasie te voorsien wat sal verseker dat die tragedie van die kreupele—wat in ons land so algemeen voorkom—feitlik sal verdwyn.

cripple care, takes a leading part in the orthopaedic campaign. It needs more funds every year and to this end it organizes the annual Easter Stamp Fund.

In recent years the value has been demonstrated of local clinics for cripples, staffed by orthopaedic nurses who attend the patients not only in the clinics but also in their own homes. This line of work is specially important because of the shortage of institutional accommodation for cripples. An article by Dr. J. J. Commerell on a recent development of orthopaedic work at home is published in this issue of the *Journal* (page 234).

The prospects of the campaign against crippling are bright. Far and away the chief cause in this country is tuberculosis. Tuberculosis of the bones and joints is as preventable as pulmonary tuberculosis itself, and with pulmonary tuberculosis we may confidently expect it to diminish in the not-far-distant future.

There are other causes of crippling, each with its own problems and prospects for the future. But for tuberculous crippling, apart from the fundamental issue of absolute prevention, the outlook is brightening. Orthopaedic surgery, with its helpmeet orthopaedic nursing, makes it possible to limit, if not entirely to remedy, the deformity and disablement caused by tuberculosis; and recent advances in the surgery of the bones and joints afford an even fairer prospect. A sign of the times is the creation by the University of Cape Town of a professorial chair of Orthopaedic Surgery. The weapons in the campaign against crippling are available and it is for the nation to provide the organization that will make certain the virtual abolition of the cripple tragedies now so common in this country.

## A REPORT ON THE DOMICILIARY TREATMENT OF TUBERCULOSIS OF BONE AND JOINT IN THE CAPE WESTERN AREA

J. J. COMMERELL, M.Ch.Orth. (L'pool), F.R.C.S. (Edin.)

*Orthopaedic Department, Groote Schuur Hospital and Lady Michaelis Home, Cape Town*

This paper is not intended to describe any new aspect in the treatment of tuberculosis of bone and joint. Its object is rather to draw attention to the method by which we have been attempting to deal with those tragic cases which present themselves at all out-patient clinics—those cases of acute tuberculosis of spine, hip and knee for whom there is no accommodation available, both children and, more especially, adults. This situation is probably common throughout the country and many methods have been tried and used on out-patients without very much satisfaction.

The basis of treatment of tuberculosis of bone and joint still remains:

1. Rest
2. Relief of pain and spasm
3. The prevention of excessive bone destruction and collapse
4. Adequate food
5. Antibiotics and INH

Before 1950 our attempts at out-patient treatment were most depressing. The total hospital accommodation as provided by the Provincial Administration for tuberculosis of bone and joint is 70 beds in the Princess Alice Home—28 for European children, 42 for non-European children and none for adults. Apart from this there are two voluntary institutions—St. Joseph's Home and the Maitland Cottage Home, having between them 160 beds for non-European children. This is the total accommodation for the whole western and south-western Cape.

We were driven to use the usual methods of out-patient treatment, which consist of putting patients in plaster-of-paris jackets or spicas and then placing their names on a waiting list, which was constantly increasing and never decreasing. We all know the consequences of this treatment. In a few cases the results are satisfactory; mostly, however, we found that the parents

regarded the plaster-of-paris casts as the end of all their responsibilities, the children were allowed to play around, the casts were constantly broken, dirty and lousy. The medicine which the child may have been given to take was never properly administered because of lack of interest on the part of the parents.

In 1948 we started a system of extra-mural after-care clinics in Cape Town. They were run under the aegis of the Cape Cripple Care Association with financial assistance from the National Council for the Care of Cripples. The Cape Cripple Care Association was greatly helped in the establishing of these clinics by the Medical Officers of Health in Cape Town and the Cape Divisional Council. After they were established and had proved their value, the Provincial Administration authorities were asked to accept financial responsibility and to administer the clinics, which they are now doing. Cape Town is divided into 5 areas and cases in these areas are under the direct care of orthopaedic sisters. Monthly extra-mural clinics are held and all cases requiring to be seen are gathered there. They are seen by an orthopaedic surgeon and also in attendance is the orthopaedic-appliance technician and a full-time clinic clerk, who has a dossier for each case with its past history which is produced at each clinic. The result was that most cripples in the area were receiving adequate attention and treatment, but the heart-break still came when dealing with those cases of acute tuberculosis of bone and joint who were being seen by the orthopaedic sisters in their own homes under frightful conditions. They found that it was absolutely useless to tell parents that the children should be kept quiet or even kept in bed, because in most of these cases, if there was a bed, it was for the use of the whole family. The children were neglected and the sanitary conveniences to which they had to go were outside.

In 1950 the orthopaedic sisters were so depressed by the whole situation that they approached me with the idea of treating these cases in their own homes on frames and in Thomas splints. A start was made on a few very carefully-selected cases, the selection being based mainly on suitable home conditions and intelligent parents. The results were so encouraging that gradually practically every case on our lists is being treated in this way, though in some the home conditions are appalling.

I am not wanting to enter into a discussion as to the relative merits of the Thomas frame in the treatment of tuberculosis of the spine and hip under ideal conditions, although I do favour its use. *The interesting point that has arisen is that the same people who previously neglected their children, while in plaster-of-paris casts, completely changed their outlook the moment the child was placed on a frame.* Firstly, a permanent, movable, hygienic bed is provided for that child alone. Secondly, the parents become interested because they can see that something is happening and they can take an active part in the care of the child. The spark of pity in their breasts is not quenched and they tend to feed the child more regularly and also to see that the medicines are administered as prescribed. We have had no case treated on a frame at home which has retrogressed; all of them have improved.

When a child is seen at a clinic and diagnosed, it is referred to the clinic clerk, who then informs the orthopaedic sister within whose area it falls. She inspects the home conditions and unless these are too hopeless—and this rarely is the case—the child is measured for its frame and actually placed on the frame at home. The sister visits the child as frequently as she deems necessary and these visits depend on the home conditions and the willingness and ability of the parents to co-operate. Intramuscular injections of streptomycin are administered by the visiting nurse of the District Nursing Organization, and the general nursing is done by the family. A plaster-of-paris turning case is made by the orthopaedic sister and the child is regularly turned by the sister with the assistance of relatives and neighbours or passers-by.

Up to the end of October 1953 of this year we have treated a total of 112 non-Europeans at home, 90 of them on frames and 22 of them in Thomas splints. These are in Cape Town areas only. When this figure is compared with the sum-total of 200 beds available for non-European children requiring hospital treatment in the whole western and south-western Cape, the magnitude of this venture can be fully appreciated. Of these 112 cases, starting from 1950, no less than 11 have been taken off their frames as clinically and radiologically healed and have gone on to the next stage of ambulant treatment of brace or appliance.

I should like to give the description of one of the orthopaedic sisters of the worst conditions under which she has had to place a child on a frame.

**J.M.,** Native female aged 3 years, lives in the heart of Windermere. In April 1953 the child was brought to hospital very ill, where she was diagnosed as having a tuberculous lumbar spine. As there was no vacancy in any of the orthopaedic institutions the child had to be nursed at home on a frame.

**Home Conditions.** The house consists of 2 very small inter-leading rooms made of corrugated iron and cardboard, with no window in either. They are separated by a stable door. The inner room has one bed, a very small table, an old washstand and also a brazier; the outer room has two beds made of wooden boards placed on top of old broken iron bedsteads, and an old dresser for cooking-utensils, etc. The family occupying this house consists of mother, father, the father's brother, and two children.

**History.** On Tuesday 19 May the child was placed on a frame. The sister was helped by a neighbour, because the mother had given birth to a new baby the previous Sunday, and the frame was then put on a wooden bench made by the father. On 25 May two sisters set out in the rain to walk from the car to the hut, clad in mackintoshes and rubber boots and with all their equipment covered by mackintosh aprons. On arrival they found it pitch dark in the hut; there was a candle burning in the inner room, but this was not sufficient to see by. 'Where is Jane?', asks one of the sisters. 'Here on the bed beside me', says the mother. They groped in the dark and finally located a head, which must be Jane. They picked her up and carried her through to the outer room, leaving the mother and new baby in bed. The two sisters then made a plaster-of-paris turning case while the rain was dripping through the roof on to their heads. The child was turned, her back washed, and then she was turned and re-adjusted on her frame.

Since then the child has progressed, the despondency of the mother has given way to optimism, for she has learnt to care for the child herself and watch her improve, and, as the weather became more sunny, the child was able to lie outside on her wooden bench most of the day. She has had vitamin oil and extras, such as glucose, dried milk, peanut butter and eggs, have been supplied by the Cape Cripple Care Association. During this period she has had a full course of streptomycin and P.A.S. In spite of the bad home-conditions the child is gaining weight and looks well. She is kept spotlessly clean by her mother and has a clean shirt and bandages every day. (See Figs. 1 and 2.) This case, as it

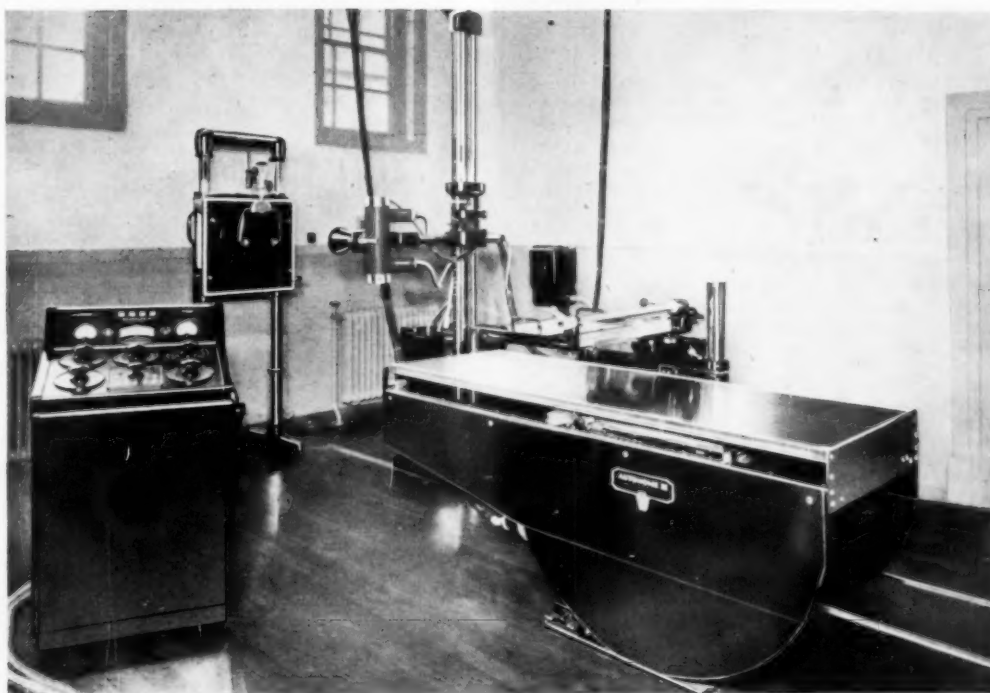


Fig. 1



Fig. 2

***Where the best radiography***  
***is carried out . . .***



In the hands of a capable radiographer the installation shown above — typical of many throughout the Union and the world — will consistently produce work of an unsurpassed standard.

The "Roentgen IV" Generator will fully load (yet never overload) a "Dynamax" rotating anode tube, whilst the "Autonome III" motor-driven Table and vertical Potter-Bucky Stand afford facilities for all radiographic procedures. Technical advice is readily available.

MODELS FOR HIGH VOLTAGE AND NORMAL VOLTAGE RANGES, ARE AVAILABLE

**WATSON & SONS (ELECTRO - MEDICAL) LTD.**

*Represented in South Africa and the Rhodesias by:*

**THE BRITISH GENERAL ELECTRIC CO. (PTY) LTD.**

Box 1327, Cape Town  
Box 922, Durban

Box 2406, Johannesburg

Box 914, Bloemfontein  
Box 42, Port Elizabeth

**THE BRITISH GENERAL ELECTRIC CO. OF CENTRAL AFRICA LTD.**

Box 1070, Bulawayo

Representing

Box 845, Salisbury

**THE GENERAL ELECTRIC CO. LTD. OF ENGLAND**

## MINNITT GAS-AIR ANALGESIA APPARATUS IMPROVED HOSPITAL MODEL

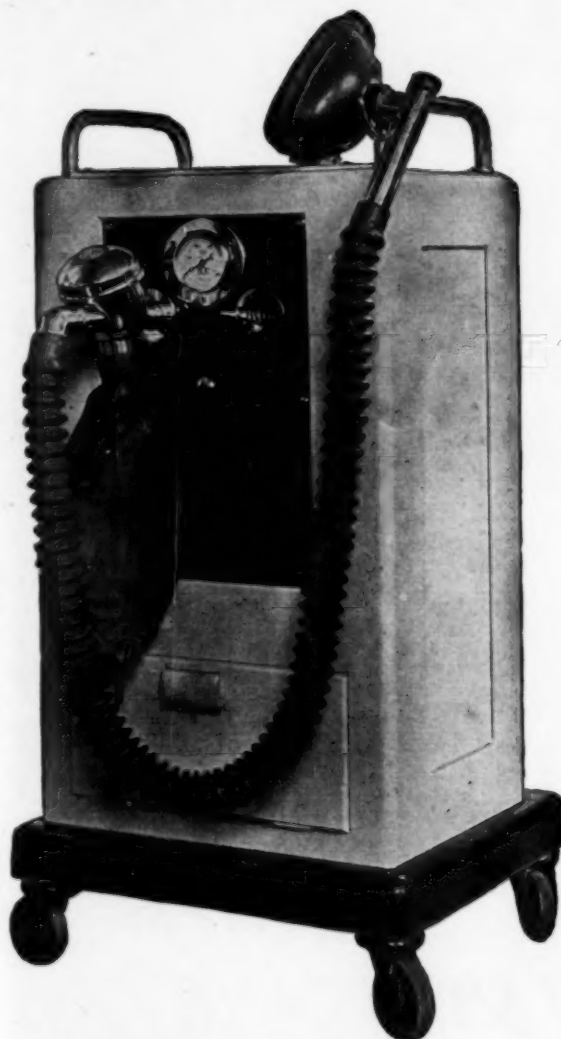
The Improved Minnitt Gas-Air Apparatus Hospital Model is encased in an attractive cabinet that is mounted on Castors. It accommodates two 200-gallon Nitrous Oxide side outlet cylinders.

This apparatus is designed to conform to the specifications stipulated by the Central Midwives' Board, England, which specifies that such apparatus must be capable of delivering a 45% Nitrous Oxide in 55% air mixture.

The apparatus is for self administration and is of the intermittent flow type, thus preventing the loss of gas when the face-piece is laid aside during administration. As a safety precaution against the state of anaesthesia being reached, the angled expiratory mount which connects the face-piece to the corrugated tubing has a hole opposite the face-piece inlet. During administration the patient covers this hole with the index finger and should the mixture carry the patient through to anaesthesia the finger will fail to keep this hole properly closed, thus allowing air to be inhaled.

The apparatus is, also, often required by doctors for administering more concentrated and rapid acting analgesia, therefore an accessory for this apparatus known as the C.M. Attachment is available at a small additional cost. It should be noted that when a C.M. Attachment is used the apparatus ceases to conform with C.M.B. specifications. Provided this attachment is plugged into the apparatus  $2\frac{1}{2}$  minutes before required, the initial few breaths taken will be at 100% Nitrous Oxide concentration. This will induce a rapid analgesia. Once the 2½-litre bag has been depleted the 45%-55% mixture augmented by a slight trickle of Nitrous Oxide is administered for maintenance of analgesia.

Further details concerning this and all other medical apparatus supplied by Messrs. African Oxygen & Acetylene (Pty.) Ltd., will be given gladly on request.



## AFRICAN OXYGEN & ACETYLENE (PTY.) LTD.

MEDICAL DEPARTMENT

Head Office:

AFROX HOUSE, Cor. Booysens Road and Webber Street, Johannesburg.  
Branches throughout the Union, Rhodesias, East Africa and South West Africa.

is on its frame at home, without any embellishments, was shown at the South African Orthopaedic Congress held in Cape Town in December 1953.

Although this method of out-patient treatment has only been carried out for the last 2½ years, the results so far appear to be extremely satisfactory, and I feel that I can strongly recommend the domiciliary use of the Thomas frame and Thomas splint throughout the hovels of this country.

The possible ill effects of frame treatment are completely negated by the good response on the part of the patient. They are also easily avoided by regular turning, which with the aid of a plaster-of-paris turning case and a few neighbours, is a simple procedure. The tilting of the frame and free fluids should control kidney troubles. Furthermore, patients are not lashed to the frame but allowed as much freedom of movement as the type of lesion permits.

We have found that, generally speaking, the response of families to having a child on a frame is rather like a boy getting his first motor car. They are extremely interested and proud and carry out all instructions fully. The child has its own bed and is kept completely at rest,

pain and spasm are relieved, elementary nursing is done for it and medicine is administered regularly.

Although the majority of cases are children, we have treated 7 adults on frames at home. They take about a month to settle down, but after this initial period they are quite happy and improve rapidly.

This method of treatment has not yet been extended into the country districts, but I can see no reason why an orthopaedic sister should not, with the aid of modern transport, be able to supervise cases even out in the country, and as more orthopaedic sisters become available we intend starting a similar approach next year in the country areas around Worcester and George, where orthopaedic clinics have already been started.

From a purely financial point of view the saving of hospital services is great. The parents supply the hospital, food and nursing. All that the Provincial authorities are called upon to provide is the extra mileage travelled by the orthopaedic sister, the frame and the streptomycin. The few beds which are available can be reserved for those cases where the severity of the lesions or the hopeless home-conditions make domiciliary treatment impossible.

## THE SCOPE OF CLINICAL ENDOCRINOLOGY\*

S. LOPIS, M.D. (RAND), M.R.C.P. (LOND.), M.R.C.P. (EDIN.)

*Department of Medicine, University of Witwatersrand, and the Endocrine and Metabolic Clinic, Johannesburg General Hospital, Johannesburg.*

During the past decade tremendous advances have been made in endocrine research. A review of this vast field is a formidable undertaking. This discussion will, therefore, be limited to a consideration of broad principles and an attempt will be made to provide an answer to the three fundamental questions:

1. What is the endocrine system?
2. How does it work?
3. What are its functions in the human body?

It is hoped that such an approach will dispose of the misconception that endocrinology is limited to a study of curious people, whose rightful place is the circus. On the contrary, convincing evidence will be presented to show that endocrinology now occupies a prominent and undisputed place in modern medicine.

It is opportune that this, the tenth annual conference, should be devoted to Endocrinology, for it is just over 100 years ago that Thomas Addison,<sup>1</sup> the father of modern endocrinology, made his famous discovery of the disease which now bears his name.

Ancient medical literature contains several references to endocrine disease. Goitre is described in Hindu religious writings in 1500 B.C. Aristotle recommended organotherapy, and the Greeks and Romans knew of

diabetes mellitus. Paracelsus stated that the best method of curing a diseased organ was to administer a similar organ.

In 1849, Berthold<sup>2</sup> discovered that implantation of cock testes caused growth of the atrophic capon-comb. Modern endocrinology was born during that year. On 15 March 1849 Thomas Addison<sup>1</sup> made his first short communication on adrenal insufficiency to the South London Medical Society. This was the first time in medical history that a disease syndrome had been attributed to a defect of a ductless gland. From that memorable beginning, endocrinology has passed through various phases.

The first period was observational, during which physicians and pathologists co-operated in describing syndromes due to gross dysfunction of endocrine glands. As examples, we may quote Addison<sup>1</sup> in 1849, Gull's description of myxoedema in 1873,<sup>3</sup> and Pierre Marie's<sup>4</sup> description on acromegaly in 1886.

An epoch of deliberate experimentation followed, when physiologists reproduced these syndromes by ablation of glands. Brown-Séquard<sup>5</sup> was the pioneer in this field with adrenalectomy in animals in 1856. Horsley<sup>6</sup> produced myxoedema in 1884, and in 1889 Minkowski and Van Mering<sup>7</sup> produced diabetes in dogs by pancreatectomy. 1891 was an eventful year in endocrine history. Murray<sup>8</sup> treated a case of myxoedema with sheep's

\*Chairman's address at the Conference on Endocrinology held at the Medical School, Witwatersrand University, Johannesburg, May 1953.

thyroid. This initiated replacement therapy with endocrine substances.

At the turn of the century adrenaline was isolated by Abel.<sup>9</sup> This ushered in the vital biochemical era with its remarkable contributions to endocrinology. Thyroxine was isolated by Kendall<sup>10</sup> in 1915, and Banting and Best<sup>11</sup> made their momentous announcement of the discovery of insulin in 1921.

From 1927 to 1935 the mysteries of the sex glands were unravelled. Ascheim and Zondek<sup>12</sup> discovered chorionic gonadotrophins in 1927, Cole and Hart<sup>13</sup> serum gonadotrophins in 1930, Doisy<sup>14</sup> oestrogens in 1929, Winsters-Steiner and Allen<sup>15</sup> corpus luteum hormone in 1932, and Ruzicka<sup>16</sup> and Butendant<sup>17</sup> male hormone in 1934.

Tribute must be paid to one of the greatest of endocrinologists, W. B. Cannon<sup>18</sup> of Harvard, who in 1931 discovered the relationship between the nerve impulse and chemical substances; also the concept that many common features in the behaviour of vertebrates are mediated by hormonal action.

The past 20 years has witnessed great advances in adrenal physiology. Swingle and Pfiffner<sup>19</sup> discovered life-saving adrenal cortical extracts in 1930. Selye<sup>20</sup> propounded his theory of the adaptation syndrome in 1936, and Kendall<sup>21</sup> isolated Compound E in the same year. Desoxycorticosterone acetate was synthesised by Steiger and Reichstein<sup>22</sup> in 1937, and Hench<sup>23</sup> treated his first case of rheumatoid arthritis with cortisone on 21 September 1948. Cortisone was synthesised by Kendall<sup>24</sup> and Sarett<sup>25</sup> in 1948.

Our historical survey is not complete without allusion to the use of radioactive iodine by Hertz and Roberts<sup>26</sup> in 1941, and the discovery of thiouracil by Astwood<sup>27</sup> in 1943; also the isolation of adrenocorticotrophic hormone by Evans<sup>28</sup> and Sayers<sup>29</sup> in 1943, and of growth hormone by Evans<sup>30</sup> in 1945.

With the isolation of the majority of the endocrine secretions a vast literature has accumulated concerning their functions in the human body.

Endocrinology has emerged from the world of giants, dwarfs and bearded ladies, from the description of curious syndromes due to gross dysfunction, to a true basic and clinical science.<sup>31</sup> We have reached an era in which research workers are investigating the complicated metabolism of cells and the function of the endocrine system in health, during minor aberrations and in all disease processes.

#### WHAT IS THE ENDOCRINE SYSTEM?

The endocrine system consists of several glands, namely the pituitary, thyroid, adrenal, gonads and parathyroids. These combine to form a delicately inter-related system, the main function of which is the control of the internal environment of the body.

Life consists of continuous adaptation to an ever-changing environment. To combat these exigencies, 3 great mechanisms have been evolved—the nervous, circulatory and endocrine.<sup>32</sup> These are intimately related, and are responsible for the changes which occur as the animal adapts itself to its environment.

The endocrine system controls the continuous chemical processes which take place in cells, and influences the

basic cellular processes such as growth and differentiation. It is also responsible for the conversion of nervous to chemical energy.

It is important to appreciate that 'hormones do not initiate new patterns of cellular function; these are in the birthright of the cells themselves. All that any hormone does is either to facilitate or inhibit certain types of chemical transformation within cells' (Long<sup>33</sup>).

Most of the time, the endocrine system is functioning so efficiently that one tends to forget that it exists. It is functioning continuously to deal with every minor or major change in the internal and external environment.

#### HOW DOES THE ENDOCRINE SYSTEM FUNCTION?

Sir Walter Langdon-Brown<sup>34</sup> described this system as an endocrine orchestra, the conductor of which is the pituitary gland and the composer the hypothalamus. One should add that the adrenal gland occupies the position of first violin.

It is erroneous to speak of the function of any one gland, for all the glands are normally in balance one with the other and act as an integrated system. One cannot conceive of altering one part of the mechanism without concomitant readjustment on the part of all the other glands.

The majority of the endocrine glands are under the control of the nervous system. The neuro-hypophysis and adrenal medulla can be regarded as extensions of the autonomic nervous system. They are formed from nervous tissue and are under direct neural control.<sup>35</sup> The vital link between the nervous and endocrine system is the hypothalamus, which Dunlop<sup>36</sup> calls 'that mysterious area of the brain where psyche and soma meet'.

It is beyond doubt that the nervous system influences anterior pituitary function and through it the thyroid, adrenal and sex glands. The anterior pituitary gland is the bridge between the hypothalamus and the other glands, but the exact paths and mechanisms are inadequately understood.

The thyroid, adrenal and gonads are controlled by their respective trophic hormones from the anterior pituitary gland. These glands are known as target glands and their secretions have the power to suppress the respective pituitary trophic hormones. Thus, there exists a delicate balance between trophic hormones and target-gland secretions. This mechanism may be disturbed in various ways. Destruction of the anterior pituitary gland will lead to atrophy and hypofunction of the target glands. Ablation of a target gland will result in hypersecretion of the respective trophic hormones.

The parathyroid glands and the islets of Langerhans are probably not under the direct control of the pituitary gland. The secretory activity of the parathyroid gland is probably influenced by the level of circulating inorganic phosphate, and the islets of Langerhans by circulating glucose.<sup>35</sup>

There is much evidence to substantiate a relationship between the peripheral glands, quite apart from the pituitary, but the mechanisms are not clearly understood.

The sensitivity of target cells or tissues is now recognised as a vital aspect of homeostatic balance. A diminished or increased tissue-response to a more or less

normally functioning gland may exist. Moreover, an excessive consumption of hormones may occur at certain times such as at puberty. Thus there is yet another mechanism which may produce symptoms of endocrine dysfunction and lead to difficulties in diagnosis and treatment.

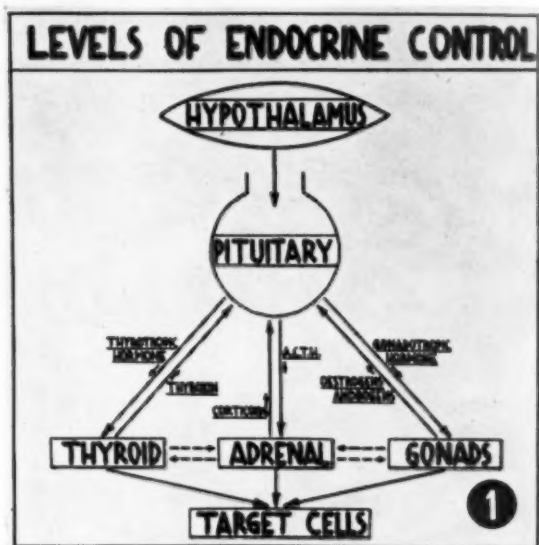


Fig. 1

Fig. 1 illustrates that the endocrine system may be involved at various levels and that many factors may be responsible for the syndromes of dysfunction. A susceptible endocrine system may be inherited. This explains, not only the familial incidence of diabetes mellitus and disease of the thyroid gland, but also the occurrence of diverse endocrine syndromes in members of the same family.

The system is also susceptible to emotional, nutritional and environmental factors.

Syndromes of hyperfunction may arise from a variety of causes, such as excessive secretion, hyperplasia, neoplasia and hypersensitivity of the target cells. Depressed function may result from involvement of the gland by trauma, infection, haemorrhage, atrophy and tumour-formation. Unresponsiveness on the part of the target tissues may also be responsible for symptoms of hypofunction.

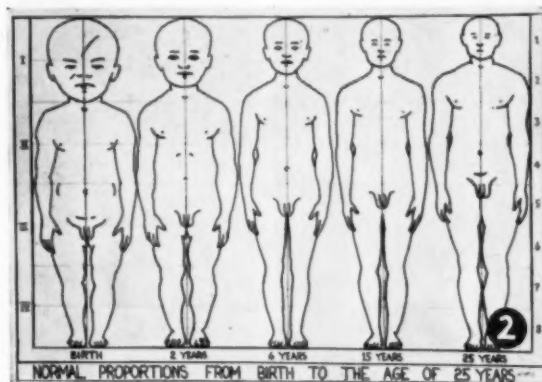
#### THE MAJOR FUNCTIONS OF THE ENDOCRINE SYSTEM

The endocrine system influences the following vital processes: (1) Growth and development, (2) metabolism, (3) sexual development and function, and (4) adaptation.

(1) *Growth.* By growth is meant the increase in the number and size of cells. All the endocrine glands have an effect on growth. The growth factor of the anterior pituitary controls growth until puberty. At this period, gonadotrophic secretion increases, and leads to a spurt

of growth and maturation. The androgens depress the growth factor and eventually lead to epiphyseal closure. Thus, growth hormone acts on the rate, and gonadal hormones on the duration of growth. The thyroid gland also plays a vital role in growth and maturation. Abnormal somatic development will, therefore, depend on the type of endocrine dysfunction and the age of onset.

The infant has a large head, long body and relatively short limbs. The ratio of upper to lower measurements is approximately 1.7 to 1.0.<sup>37</sup> Growth proceeds rapidly in the limbs, so that the upper and lower measurements are approximately equal at the age of 10 to 11 years.<sup>37</sup>

Fig. 2. (After Stratz, *Der Körper des Kindes*, 1904).

If pituitary function is deficient, the Lorain-Levi type of dwarfism occurs. The patient is small, well-proportioned and infantilistic. Mental activity is often normal, because the deficiency usually occurs after the age of 6 years, by which time the brain is well developed.

In the Laurence-Moon-Biedl syndrome there occurs the combination of dwarfism, obesity, mental retardation, polydactyly and retinitis pigmentosa. The endocrine symptoms are probably due to a congenital anomaly of the hypothalamus.

Achondroplasia is a congenital condition in which the main abnormality is a retardation of growth in the extremities. This is an example of disproportionate dwarfism. There is no evidence that it is due to endocrinal causes.

In thyroid deficiency, such as cretinism, profound effects of growth occur. The child is dwarfed and retains infantile proportions and there is marked mental and sexual retardation.

If androgens and oestrogens are absent the epiphyses fail to unite. Growth continues after the age of 20 years and the limbs become abnormally long. Thus, in eunuchoidism, there is disproportionate gigantism. The span exceeds the height, and the lower measurement is greater than the upper measurement.

Turner's syndrome, or ovarian agenesis, is due to a congenital absence or aplasia of the ovaries. The patient is short and has primary amenorrhoea. Cubitus valgus, webbing of the neck and congenital heart lesions also occur.

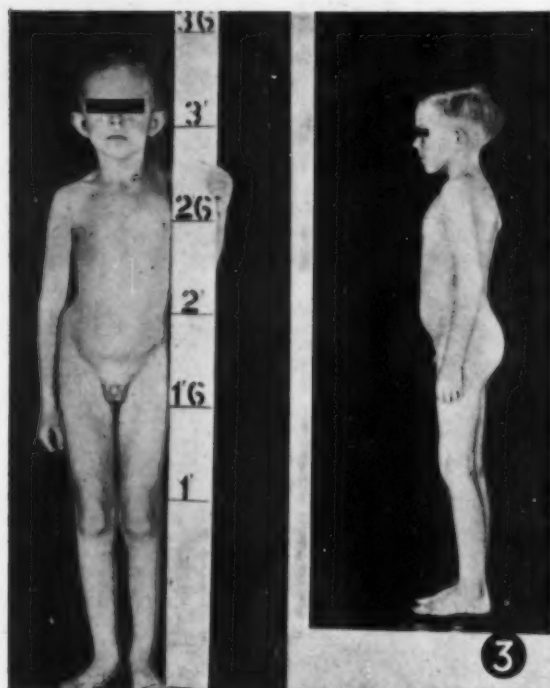


Fig. 3. Lorrain-Levi Dwarfism (age 13 years).

If excessive growth hormone occurs during childhood, a proportionate giant develops. Acromegaly is produced if this occurs after the epiphyses have united. Enlargement occurs only in those parts which are still able to grow, namely the face, hands and feet. The facial features are those which one would expect in a person living to 200 years (Keith <sup>38</sup>).

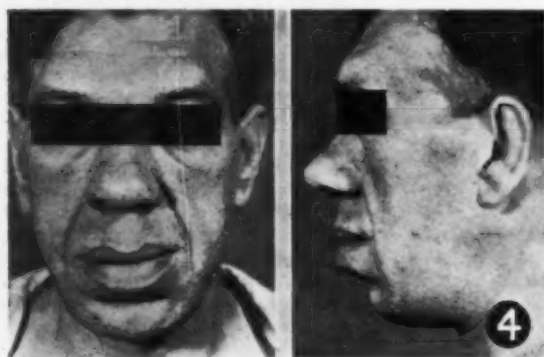


Fig. 4. Acromegalic Facies (Dr. A. C. Crooke's case).

When excessive androgen secretion occurs during childhood, there is acceleration of growth for a while. The epiphyses then close prematurely and the child

remains dwarfed and disproportionate. The trunk is well developed but the limbs remain short.

(2) *Metabolism.* The endocrine system influences carbohydrate, protein, fat, water, electrolyte and calcium metabolism. It controls the chemical processes which take place in every living cell. Figure 6 summarises the main metabolic effects of the endocrine glands.

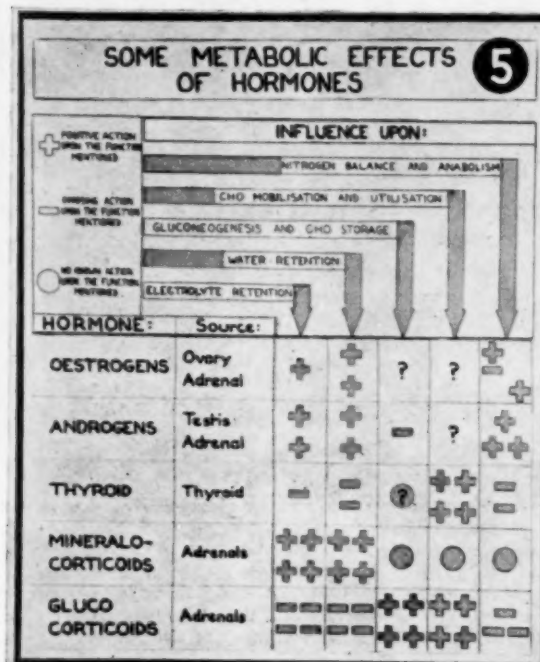


Fig. 5. (adapted from McGavack <sup>39</sup>).

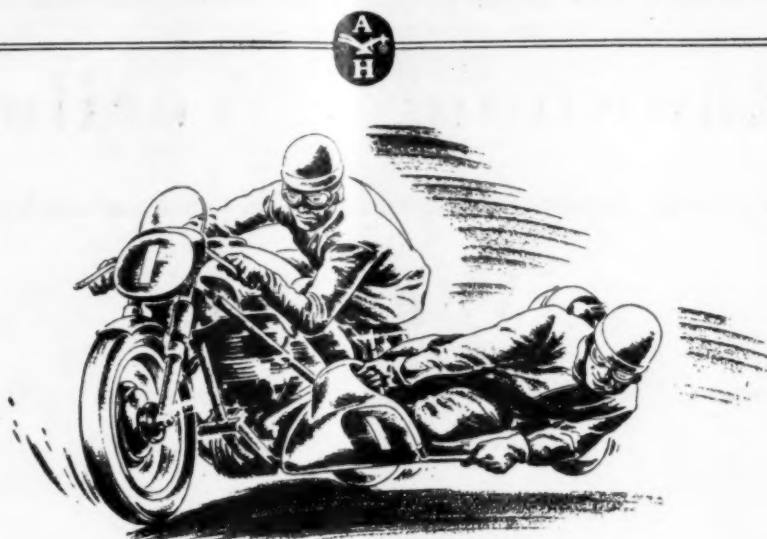
Normal metabolism is the result of a delicate balance between the actions of several glands. Thus, it is quite fallacious to think of hyperglycaemia as a disorder of only the islets of Langerhans, because the whole endocrine system is involved in the control of blood sugar.

Obesity has frequently been ascribed to endocrine dysfunction, but most cases result from excessive caloric intake. The endocrine system may, however, influence the distribution of fat, as in Cushing's syndrome. In this condition there occurs the typical moon face, buffalo obesity and thin extremities.

In progressive lipodystrophy there is a redistribution of fat, which disappears from the upper and is deposited in the lower half of the body.

Simmonds' disease (hypopituitarism) may be associated with marked loss of weight. However, Sheehan <sup>40</sup> has shown that the nutrition may be well preserved in hypopituitarism.

Emaciation of the most severe degree occurs in anorexia nervosa. This syndrome usually occurs in young women with a psychological background. Dietary



## *Where combined action Succeeds*

From apparent defeat, many a contest is won by combined action. The joint administration of penicillin and the sulphonamides frequently establishes successful therapy, when the oral administration of the antibiotic or chemotherapeutic agent alone has been ineffective.

Sulpenin, containing penicillin, sulphadiazine and sulphamerazine in balanced dosage is a convenient means of applying combined therapy in the treatment of many infections due to susceptible micro-organisms. By utilising the synergistic action known to exist between penicillin and the sulphonamides, the antibacterial range is increased, the likelihood of kidney damage is lessened and the tendency for the bacteria to develop mutant strains resistant to one or other of the component drugs is reduced.

# SULPENIN

*Combined Oral Penicillin and Sulphonamide Therapy*

In tubes of 10 and bottles of 100 tablets.

Each tablet contains

Crystalline Penicillin G (Potassium Salt), 100,000 units,  
Sulphamerazine, 0.25 gramme, Sulphadiazine, 0.25 gramme.

Literature on request.

ALLEN & HANBURY'S (AFRICA) LTD  
INCORPORATED IN ENGLAND  
121 CONGELLA ROAD • DURBAN

# Rauwiloid + Veriloid

## Veriloid

in many respects **THE SAFEST** among the potent hypotensives is a unique alkaloidal extract of *Veratrum viride*

- lowers blood pressure by vasorelaxation independent of vagomotor effect.
- no ganglionic or adrenergic blocking
- no danger of postural hypotension
- cardiac output is not reduced
- no compromise of renal function
- cerebral blood flow not decreased
- tolerance or sensitivity rarely develops
- can be given over long periods without loss of efficacy

now in a new and highly advantageous dosage form

**Other Dosage  
Forms  
of Veriloid**

**Veriloid**

(plain) is available in 2 mg.-scored slow dissolving tablets.

**Veriloid VP**

combines Veriloid 2 mg. and phenobarbital 15 mg. ( $\frac{1}{4}$  gr.) per tablet.

## RAUWILOID + VERILOID

The addition of Rauwiloid (1 mg) to Veriloid (3 mg) in one tablet presents unique advantages. Rauwiloid, a mild hypotensive producing virtually no side actions, leads to desirable moderate bradycardia, a feeling of calm tranquility and rapid remission of symptoms. It apparently potentiates the powerful hypotensive action of Veriloid, thus making it possible for the patient to obtain striking reduction of blood pressure from lower doses of Veriloid, and with less likelihood of side actions. Average dose, one tablet 3 times daily, ideally after meals, at intervals of not less than 4 hours.

**RIKER LABORATORIES AFRICA (PTY.) LTD.**

**P.O. Box 1355, PORT ELIZABETH**

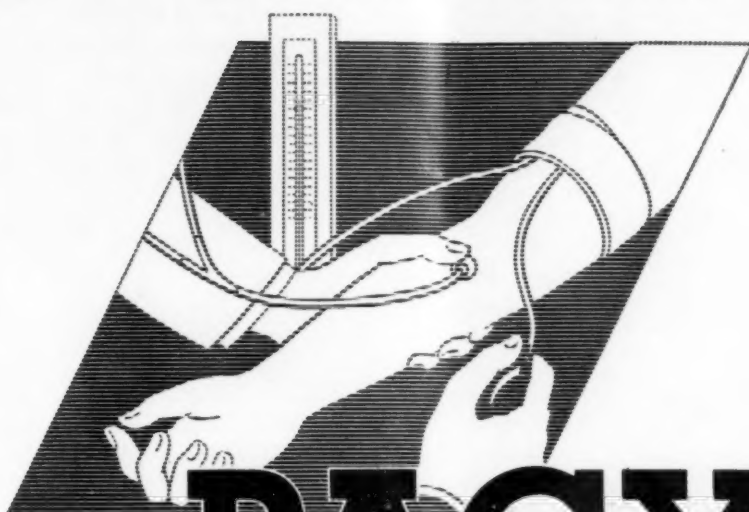
**LOS ANGELES**

**TORONTO**

**NOTTINGHAM**

3242-3

*Please Support Our Advertisers — Ondersteun Asseblief Ons Adverteerders*



# PACYL

## For HYPERTENSION

- ❑ PACYL, a Choline derivative, acts on the parasympathetic system in a physiological manner, producing a lasting reduction in cases of pathologically raised blood pressure.
- ❑ PACYL has exceptional merits in relieving the distressing subjective symptoms, such as headache, vertigo, insomnia, etc.
- ❑ PACYL has also proved to be the treatment of choice for ambulant patients. No initial rest in bed is required and patients remain at work throughout the treatment.
- ❑ PACYL has a gentle and persistent vasodilator effect and removes local vascular spasm, thereby facilitating and improving the general circulation.
- ❑ PACYL has no side effects and there are no contraindications to its use.

Bottles of 50 and 200 tablets

For further information and samples apply to our Agents:  
**LENNON LIMITED, P.O. Box 8389, JOHANNESBURG**

**VERITAS DRUG COMPANY LIMITED**  
LONDON AND SHREWSBURY, ENGLAND

*Please Support Our Advertisers — Ondersteun Asseblief Ons Adverteerders*



*When youthful energies are  
unaccountably mislaid—what then?*

Here, of course, is where a genuinely  
nourishing tonic can help—a tonic such as Minadex.  
Minadex combats fatigue, fortifies resistance to infection  
and promotes growth of healthy body tissues. Its delightful  
orange flavour is another welcome feature appealing especially to  
children—ensuring that the doses you prescribe are *regularly* taken.



**Syrup MINADEX** Trade mark

Mineral-vitamin Tonic: 6-oz. & 12-oz. bottles

GLAXO LABORATORIES (S.A.) (PTY.) LTD., P.O. BOX 9875, JOHANNESBURG

AGENTS: M. & J. Pharmaceuticals (Pty.) Ltd., P.O. Box 784, Port Elizabeth

**CRYSTAPEN**

WHICHEVER WAY  
YOU LOOK AT IT

**CRYSTAPEN**

is a name to note in  
PENICILLIN THERAPY

**CRYSTAPEN for Injection**  
(Crystalline sodium penicillin G)  
Vials of 100,000, 200,000, 500,000, and 1,000,000  
units: In cartons of ten vials

**CRYSTAPEN Ointment**  
2,000 units sodium penicillin G per gram:  
½-oz tubes

**High Potency CRYSTAPEN Ointment**  
25,000 units sodium penicillin G per gram:  
1 drachm tubes

**CRYSTAPEN Tablets**  
Potassium penicillin G:  
125 mg. (200,000 units) and 250 mg. (400,000  
units): bottles of 12

Using Glaxo penicillins does nothing if not confirm their versatility and purity. Choosing them is nothing if not simple—especially when it comes to Glaxo *crystalline* penicillins. Each preparation is identified by the name CRYSTAPEN. For instance, Crystapen Injection names the aqueous injection of crystalline penicillin—now so widely preferred for generalised infections. Again, High Potency Crystapen Ointment names a crystalline penicillin ointment of exceptional potency and penetrating power. Whatever the form of penicillin therapy—local or systemic—there is almost certainly a CRYSTAPEN penicillin to meet the need.

the long and  
the short of it

**CRYSTALLINE PENICILLIN G**

**CRYSTAPEN** Trade mark

GLAXO LABORATORIES (S.A.) (PTY.) LIMITED, P.O. BOX 9875 JOHANNESBURG  
Agents: M. & J. Pharmaceuticals (Pty.) Ltd., P.O. Box 784, Port Elizabeth.



Fig. 6. Cushing's Syndrome (Prof. D. M. Dunlop's case).

restriction, which is often voluntary, leads to emaciation and eventual pituitary failure.

(3) *Sexual Development.* All human beings are ambisexual, each sex secreting male and female sex hormones. The anterior pituitary gland controls the gonads and the adrenal glands, which in turn secrete the oestrogens and androgens. These hormones control primary and secondary sexual development. Pituitary and gonadal function at puberty leads to profound reorientation of the whole endocrine system. Transient changes of endocrine balance are fairly common, but the majority correct themselves in time.

Froehlich's syndrome is diagnosed too frequently in young boys who are obese and appear to have underdeveloped genitalia. The majority of these lads grow up into normal adult men and the diagnosis should be made with reservation.

Menstruation and reproduction are vital functions under endocrine control and have formed the basis for intensive research. Disorders may arise from lesions at various levels, such as the hypothalamus, pituitary, adrenals and gonads. (These will form the subject for a separate discussion.)

At the menopause gonadal activity wanes and a chain of endocrinological variations follow. There is increased function of the basophil cells of the pituitary gland, the adrenal cortex and thyroid. The metabolic burden shifts from the gonads to the adrenal glands.<sup>39</sup> If readjustment is adequate, the climacterium is asymptomatic. However, aberrations may occur and lead to disease syndromes. It is possible that the endocrine adjustment at the menopause is the beginning of the ageing process.

(4) *Adaptation.* Hans Selye<sup>30</sup> propounded his theory of the adaptation syndrome in 1936, a short while before the discovery of cortisone. He has shown experimentally that the endocrine system is responsible for an animal's ability to adapt itself to the continuous flow of unspecific aggressions which bombard it incessantly. These consist of infections, intoxications, physical and emotional traumatism, excess of heat and cold and many other noxious stimuli.

Stress stimulates the anterior pituitary gland to produce adrenocorticotrophin, which provokes glucocorticoid secretion from the adrenal cortex. The glucocorticoids have an inhibitory effect on the target cells. They cause catabolism and a diminution of both allergic response and granulation-tissue formation. At the same time, somatotrophic hormone, which has the reverse effect, may be discharged. It enhances defensive reactions such as anabolism and augments granulation-tissue formation and allergic responses. The mineralocorticoids are also involved in this process.

The final effect of the stress will depend on the balance between adrenocorticotrophic hormone, glucocorticoids, somatotrophic hormone and mineralocorticoids. If adaptation is normal perfect health results. If the onslaughts are excessive this defence mechanism becomes pathological and diseases of adaptation may arise such as hypertension, nephritis, arthritis and peptic ulcer. These continuous, unspecific aggressions may eventually wear out our defence mechanism and produce old age and death.

The clinical use of adrenocorticotrophin and cortisone suggests that the adrenal cortex may be involved in diseases such as arthritis, rheumatic fever, collagen conditions and asthma, which one could never have imagined as having an endocrinological background.

#### THE RELATION OF THE ENDOCRINE SYSTEM TO OTHER SYSTEMS OF THE BODY

The preceding description of the vital functions of the endocrine system provides ample proof that this system is related to all other systems of the body. To quote Talbot,<sup>41</sup> 'It appears safe to say that there is hardly an organ or structure in the body that is not influenced directly or indirectly by endocrine forces, or a clinical condition that is not accompanied by functional or homeostatic alterations in the activity of some endocrine gland'.

*Central Nervous System.* The nervous control of the endocrine system has been discussed. Hormonal secretions, in turn, exert a profound effect on neural function. The anxious state of the thyrotoxic patient, the mental retardation of the cretin, the lack of aggression of the eunuch and the mental depression of Cushing's syndrome are well-known examples.

Recent work has suggested a direct link between the adrenal gland and the psychoses. The adrenal glands of schizophrenic patients do not react to the stimulus of adrenocorticotrophic hormone as do those of normal persons under stress.<sup>42</sup> Moreover, metabolic abnormalities have been demonstrated in these patients.<sup>43</sup> Adrenocorticotrophic hormone is being used in the treatment of delirium tremens,<sup>44</sup> and dehydroisoandrosterone has produced good results in psychopathic patients.<sup>45</sup>

This work suggests that psychotic patients may have an endocrine and metabolic individuality. This is a new concept in medicine and one that offers great possibilities for research.

*Cardiovascular System.* The hormones which are conveyed by the cardiovascular system may have far-reaching effects on the heart and great vessels.

Marked cardiac enlargement may occur in acromegaly. The thyrotoxic patient has tachycardia and a high pulse-pressure. Auricular fibrillation and congestive heart failure may occur.

Cardiomegaly may also occur in myxoedema and pericardial effusion may be massive. Dramatic reversion to normal size may follow adequate thyroid therapy. The adrenal gland influences electrolyte balance and may have profound effects on the circulation—witness the persistent hypotension in Addison's disease and the marked hypertension of Cushing's syndrome.

The high incidence of vascular degeneration in diabetic subjects is a problem which demands urgent elucidation.

*The Liver.* The liver plays an important role in the metabolism of endocrine secretions. There is evidence that it inactivates oestrogens. A disease process such as cirrhosis may lead to impairment of this function, and a high level of circulating oestrogens may result. In the male, testicular atrophy, loss of libido, gynecomastia and loss of body hair may occur. Menstrual irregularities, endometrial changes and involvement of body hair have been reported in the female. Furthermore, palmar erythema and spider telangiectasia have been attributed to this endocrine imbalance. Pincus *et al.*<sup>46</sup> have shown disturbed hormonal levels in liver disease.

The relationship of the liver to other steroid hormones is still being investigated.

*The Skin.* The health of the skin is dependent on normal endocrine balance, and it will mirror every disturbance of hormonal function.

In thyrotoxicosis the skin is smooth, warm and moist and the hair is fine and silky. In contrast, the hypothyroidic patient has a cold, dry, coarse and scaly skin with myxoedematous infiltration. The hair is dry and coarse and may fall out.

The sex hormones have a profound effect on the physiology of the skin. Androgens stimulate the growth of epidermal structures and promote development of hair follicles and sebaceous glands. They also induce vasodilatation of the skin capillaries and control the tanning of the skin when exposed to sunlight.<sup>47</sup> In contrast, the oestrogens inhibit the growth of the epidermis and decrease sebaceous gland development.

In hypogonadism due to pituitary or testicular deficiency, the patient has a pale, pasty appearance owing to diminished capillary blood-flow and lack of pigmentation. The skin is smooth and fine and is often wrinkled. The hair of the head is profuse, fine and silky. Facial hair is absent and body hair is sparse or absent. Many of these features are rapidly corrected by androgen replacement therapy. The numerous skin changes which may be related to puberty, menstruation, pregnancy and the menopause are reflections of changing levels of hormones.

Addison's disease is characterised by a brownish pigmentation of the body and more particularly the exposed areas. The skin shows loss of hair and absence of seborrhoea, and acne. In the adrenogenital syndrome the skin is greasy and hirsute and acne is present. The patient with Cushing's syndrome has a dusky, pigmented, plethoric appearance. Hirsutism may occur and the purple striae of the body are characteristic.

*The Teeth.* The endocrine system influences the growth of the jaw and teeth during their period of active development. Retardation of dental development occurs in hypofunction of the pituitary, thyroid and sex glands, while acceleration of growth will follow hyperfunction of these glands. The dental development usually conforms to the chronologic skeletal development and is a useful aid in endocrine diagnosis.<sup>48</sup>

#### CONCLUSIONS

We have reached a stage in modern endocrinology, where the clinical syndromes of endocrine dysfunction have been adequately described. Many of these syndromes have been reproduced experimentally by the physiologist. The biochemist has made a very great contribution by isolating and synthesizing the majority of these hormones. He has facilitated the study of the biological effect of hormones on various functions of the body.

It should be emphasized that these hormones are potent and that many ill-effects will follow their indiscriminate use. The preparations used to replace hormonal deficiencies in the syndromes of hypofunction may have powerful effects. The hyperfunctional states present a greater problem. Surgery and radiation therapy aim at destroying the glands. This is unphysiological, and substances must be found that will depress or antagonize excessive endocrine secretions.

There are several important trends in endocrine research. We know little of the biogenesis of the hormones. From what are they formed, and what factors control their formation? There is also a dearth of knowledge concerning their transformation during metabolism and their eventual fate.

Biochemists are engaged in the study of the intermediary metabolism of cells. Attempts are being made to isolate the enzymes and discover how and where the hormones act both during health and disease.

Methods for the estimation of hormone levels are still inadequate. Most techniques are concerned with the excretion products in the urine. Procedures for estimating blood levels are urgently required.

Great strides have been made in the study of malignancy. The studies of Lieberman and Debrimer<sup>49</sup> on the steroid excretion in carcinomatous patients are significant. The beneficial effects of castration and oestrogens on prostatic carcinoma are well known.<sup>50</sup> The relief of mammary carcinoma by castration and testosterone is yet another example.<sup>51</sup> These observations suggest that a change in hormonal balance in the body may cause permanent regression of cancer growth.

In this rapid survey, I have endeavoured to review the more important aspects of a vast subject. I have attempted to show that success has been achieved by the combined efforts of physicians, physiologists, biochemists, paediatricians and surgeons.

Endocrinology now embraces every facet of medicine and its boundaries are spreading daily. We have witnessed many startling discoveries during the past few years, and the solution of many fundamental biological problems may be reasonably expected in the near future.

I am grateful to Professor G. A. Elliott for his advice and encouragement; also to Mr. M. A. Shevitz and Mr. J. P. Shreve for the photographs and charts.

## REFERENCES

- Addison, T. H. (1849): Lond. Med. Gaz., **43**, 517.
- Berthold, A. A. (1849): Arch. Anat. Physiol. wiss. Med., **42**.
- Gull, W. (1873): Trans. Clin. Soc. Lond., **7**, 180.
- Marie, P. and Souza-Leite. *Essays on Acromegaly* (1891): Trans. by Hutchinson, P. S. London: New Sydenham Society Publ., v, 137.
- Brown-Séquard, E. (1856): Arch. gén Méd., **8**, 385.
- Horsley, V. (1885): Brit. Med. J., **1**, 111.
- Minkowski, O. and Van Mering, J. (1889): Arch. exp. Path. Pharmacol., **26**, 371.
- Murray, G. R. (1891): Brit. Med. J., **2**, 796.
- Abel, J. J. (1902): Bull. Johns Hopk. Hosp., **13**, 29.
- Kendall, E. C. (1915): Trans. Assoc. Amer. Phys., **30**, 420.
- Banting, F. G. and Best, C. H. (1922): J. Lab. Clin. Med., **7**, 251.
- Ascheim, S. and Zondek, B. (1927): Klin. Wschr., **6**, 1321.
- Cole, H. H. and Hart, G. H. (1930): Amer. J. Physiol., **93**, 57.
- Doisy, E. A., Veler, C. D. and Thayer, S. A. (1929): *Ibid*, **90**, 329.
- Allen, E. (1932): J. Mo. Med. Assoc., **29**, 502.
- Ruzicka, L., Goldberg, M. W., Meyer, J., Brungger, H. and Eichenberger, E. (1934): Helv. chim. Acta., **17**, 1395.
- Butendant, A. and Dannebaum, H. (1934): Hoppe-Seyl. Z. physiol. Chem., **229**, 192.
- Cannon, W. B. and Bacq, Z. M. (1931): Amer. J. Physiol., **96**, 392.
- Swingle, W. W. and Pfiffner, J. J. (1930): Science, **71**, 321.
- Selye, H. (1936): Nature, **138**, 32.
- Kendall, E. C., Mason, H. L. and Myers, C. S. (1936): Proc. Mayo Clin., **11**, 351.
- Steiger, M. and Reichstein, T. (1937): Helv. chim. Acta., **29**, 1164.
- Hench, P. S., Kendall, E. C., Slocumb, C. H. and Polley, H. F. (1949): Proc. Mayo Clin., **24**, 181.
- Kendall, E. C. (1950): Chem. Engng. News, **28**, 2074.
- Sarett, L. H. (1948): J. Amer. Chem. Soc., **70**, 1454.
- Hertz, S. and Roberts, A. (1942): J. Clin. Invest., **21**, 624.
- Astwood, E. B. (1943): J. Pharmacol., **78**, 79.
- Li, C. H., Simpson, M. E. and Evans, H. M. (1943): J. Biol. Chem., **149**, 413.
- Sayers, G., White, A. and Long, C. N. H. (1943): *Ibid*, **149**, 425.
- Evans, H. M., Li, C. H. and Simpson, M. E. (1945): *Ibid*, **159**, 353.
- Long, C. N. H. (1948): Endocrinology, **43**, 89.
- Means, J. H. (1951): Ann. Intern. Med., **34**, 1311.
- Long, C. N. H. cited by Means.<sup>32</sup>
- Langdon-Brown, W. (1935): *The Integration of the Endocrine System*, Cambridge University Press.
- Harris, G. W. (1950): Brit. Med. Bull., **6**, 345.
- Dunlop, D. M. (1951): Brit. J. Derm., **63**, 43.
- Wilkins, L. (1950): *The Diagnosis and Treatment of Endocrine Disorders in Childhood and Adolescence*. Springfield, Ill.: C. C. Thomas.
- Keith, cited by Brauer, J. C. et al. (1952): *Dentistry for Children*, 3rd ed. New York and Toronto: Blakiston Co.
- McGavack, T. H. (1950): Geriatrics, **5**, 151.
- Sheehan, H. L. (1939): Quart. J. Med., **8**, 277.
- Talbot, N. B. (1950): Pediatrics, **6**, 1.
- Pincus, G. and Hoagland, H. (1950): Amer. J. Psychiat., **106**, 651.
- Bellak, L. (1948): *Dementia Praecox*. New York: Grune and Stratton.
- Smith, J. J. (1950): N.Y. St. J. Med., **50**, 1704.
- Strauss, E. B., Sands, D. E., Robinson, A. M., Tindall, W. J. and Stevenson, W. A. H. (1952): Brit. Med. J., **2**, 64.
- Pincus, I. J., Rakoff, A. E., Cohn, E. M. and Tumen, H. J. (1951): Gastroenterology, **19**, 735.
- MacGregor, T. N. (1951): Brit. J. Derm., **63**, 52.
- Stafie, E. C. (1952): Radiology, **58**, 9.
- Lieberman, S., Dobriner, K., Hill, B. R., Fieser, L. F. and Rhoads, C. P. (1948): J. Biol. Chem., **172**, 263.
- Higgins, C., Stevens, R. E. and Hodges, C. V. (1941): Arch. Surg., **43**, 209.
- Farrow, J. H. and Woodard, H. Q. (1942): J. Amer. Med. Assoc., **118**, 339.

## IMPRESSIONS OF THE BRITISH NATIONAL HEALTH SERVICE

D. POTTINGER, M.B., B.Ch.

Cape Town

After working for over two years in various departments of the National Health Service in England the following are briefly my impressions of this Service and the changes brought about by its introduction.

General practice is not greatly changed. There are fewer so-called private patients, and fewer night calls; patients tend to seek treatment during normal surgery or visiting hours rather than await the black and midnight hour. Most practitioners are able to have regular holidays, and those who have formed partnerships are able to get away at week-ends, which many could not do previously.

The older practitioners, I think, are finding it difficult to adjust their manner of practice to new methods, and many hanker after the old days; they miss the personal contacts and also the time required for making and keeping them, that present circumstances have removed. The facilities provided by the service in laboratory, hospital and home are not fully appreciated by those who have for most of their careers worked without and not grown to depend upon them. Changes in the mode of practice and prescribing, and the necessary transference of responsibility to the hospitals, come as unhappy changes to those who have been able to follow their patients more closely through their illnesses.

Young men who are able to find themselves a practice are able to earn a reasonable salary with little uncertainty, and little less outlay than their elders, but they are older and more experienced than the man entering practice 30 years ago.

I think all practitioners will agree that there is less uncertainty about their income today, and the older man is able to leave much work to an assistant or junior partner without threatening his own income, because the patients are in the common pool, and do not expect his individual attention.

Time devoted to surgeries and visits is less, owing to the large numbers; moreover less time is devoted to the social aspect, and patients who have waited for some considerable time are reluctant to keep others waiting longer than need be. Unwarranted attendance at surgeries and calls for visits are few; the cost of prescriptions appears to have minimized this. Night calls are fewer, but the over-all volume of work has increased somewhat, though this is offset by the regularity with which practitioners are able to get away by virtue of the rotas and partnerships that exist.

Midwifery, ambulance and laboratory services are of great assistance, the last-mentioned adding considerably to the pleasure and interest of general practice. Midwives are a great saving in time for deliveries at home, and, through their frequent contacts with the patients, are able to give advice and inspire confidence.

## HOSPITAL SERVICES

Hospitals, being grouped together and not restricted much in expenditure, do provide an excellent service. Even the smallest hospitals have their visiting consultants, and, though they are

being hard-pressed by the large numbers of out-patient and in-patient attendances, the service afforded is unparalleled. The cohesion between consultants, and the ease with which a patient may be transferred from one department to another for opinion is striking. The large turn-over of patients, and the shortages of nurses and residents has put an added burden on these members of the hospital staff.

Patients have mixed feelings about the Service; the poor are far better off and a charwoman will receive the same attention as her mistress, but some are inclined to feel that there is no longer the former intimacy between doctor and patient and that the practitioner of the old school who was a friend and champion of the family is fast dying out. The fault probably lies with both parties, for patients are less considerate and those imposing on their doctors are inclined to destroy this cohesion. Many feel that their contributions are excessive and therefore expect all the more value. It is unfortunate that it is not made known more widely and advertised in waiting rooms that only a fraction goes towards medical care, the remainder being towards Old Age Pensions and Sick Benefits.

The nation's health is vastly improved, as evidenced by the decrease in infant mortality and the increased longevity of the aged since the introduction of the service.

Loading and the encouragement given to the formation of partnerships is a good thing for both patient and doctor, for the doctor is less likely to be overburdened if he has a colleague with

whom to share his responsibilities and to whom he can turn for a second opinion. With the present scheme the practitioner is encouraged to practise preventive medicine; as he is consulted freely and usually early there is all the more scope for this.

#### HELPING HAND OF THE SERVICE

In England one is followed through life by the helping hand of the Health Service; and from the time of its inception—for richer, for poorer, for better, for worse—the child is assisted to become the man. There are the ante-natal clinics, midwifery services and grants of financial aid, infant and child welfare clinics dealing with nutritional and other minor problems, paediatricians, school clinics, dental services, special schools, general-practitioner and hospital services, chest clinics, mental hospitals, homes for the aged. There are also almoners, and home helps for those who live alone and are unable to live without some assistance. It is a formidable array.

The National Health Service is passing from a vigorous adolescence into a robust adult life. There has been expansion and integration of the ancillary services and a positive approach to preventive medicine. What will be the ultimate shape of the service? If a salaried service is introduced it will be most unfortunate, for it will breed an army of civil servants with a negative approach to their subject.

### WORK OF THE BRITISH SERVICE DESCRIBED\*

The National Health Service, established in 1948, consolidated and extended the existing personal and public-health services. It covers the whole community, and treatment under the service is not dependent upon the payment of contributions to the National Insurance scheme. The National Insurance scheme, however, provides cash benefits for sickness, injury, etc.

In England and Wales the Minister of Health (in Scotland the Secretary of State) has direct responsibility for the provision of all hospital and specialist services, including those for the mentally ill or defective and for medical research, for a public-health laboratory service and for a national blood transfusion service. In Northern Ireland the scheme differs only slightly.

The health services are financed mainly out of taxation, but also partly from local rates, from contributions from the National Insurance Fund, and from charges levied for certain items in the service.

#### THE GENERAL MEDICAL (OR PRACTITIONER) SERVICES

The family doctor is the basis of the National Health Service. All patients are free to choose and change their doctors; doctors may also refuse patients, and may continue to attend paying patients outside the service. The Family Doctor Service, which is free to the patient, is usually organized from the doctor's own surgery, and there is no official interference with his clinical judgment. A doctor in public service is usually paid by the State on the basis of the number of patients registered with him, which may not exceed 3,500 and is generally around 2,400. No doctor can be forced to leave his existing practice, but a doctor may not take up practice in an area where there are considered to be enough doctors.

The Dental Service, which also leaves both patient and dentist free to choose and accept each other, provides for all forms of treatment, including the supply of dentures. Some charges are made in this service, but they do not apply to dental examinations and not (except for dentures) to persons under 21 or expectant or nursing mothers.

In the Ophthalmic Service patients may, on their doctors' recommendation, have their eyes tested free, but are required to make a payment towards the cost of spectacles (except for children's spectacles in standard frames).

Everyone on a doctor's list is entitled to drugs and medicines. A charge of 1s. on each prescription is payable but may be reclaimed on grounds of hardship.

#### HOSPITAL AND SPECIALIST SERVICES

These services include the provision of all forms of hospital treatment at hospitals of all kinds, tuberculosis sanatoria, mental hospitals and institutions, infectious disease units, convalescent homes and rehabilitation centres. The great majority of specialists in the country are employed in these services.

Attached to some hospitals are trained social workers (almoners and psychiatric social workers) who assist in the treatment of disease by investigating and adjusting the social and economic problems of patients.

All these services are available free of charge (except for medicines and some appliances when supplied to out-patients) and with no insurance qualifications. The family doctor generally makes all the necessary arrangements.

#### LOCAL HEALTH SERVICES

*Maternity and Child Welfare Service* (except in hospitals and maternity homes)

The maternity and child welfare services provided by local health authorities include ante- and post-natal clinics, and child welfare centres to which mothers are encouraged to take their infants for supervision and advice. Local health authorities are also responsible for the provision of midwives for home confinements (in addition to the family doctor), for arranging free vaccination against smallpox and immunization against diphtheria, and for providing or supervising day nurseries for children under 5 years of age. Health visitors (nurses with a special training) visit and advise mothers, children and sick people in their homes.

#### *Home and Other Services*

Local authorities provide nurses (free) or domestic help (for a charge according to means) for persons requiring attention in their own homes. Further provision for the care and after-care of sick persons is made by some authorities. They also provide, either directly or by arrangement with voluntary organizations, ambulance or car services to carry patients to and from hospitals and clinics. The control of infectious disease is also the responsibility of the local Medical Officer of Health. A few authorities have provided and administer health centres for the local practitioner services.

#### *Mental Health*

The initial steps in providing care and treatment for mentally sick or defective people are taken by local health authorities, who



## Triple Sulfa<sup>\*</sup> Cream

High bacteriostatic and  
bacteriocidal activity against a wide  
variety of vaginal pathogens

relieves symptoms  
eliminates discharge  
hastens healing

in non-specific leucorrhea  
following cervical cauterisation  
following vaginal plastics  
in routine postpartum care

\* Triple Sulfa Cream: Sulphathiazole  
N'Acetylsulphanilamide, N'Benzoylsulphanilamide  
with urea peroxide

On original prescriptions specify "Triple Sulfa Cream with applicator"



To restore and maintain normal acidity

## Aci-jel<sup>®</sup> IN RECURRENT VAGINITIS

Restoration of normal acidity is important  
in preventing recurrence of vaginal infection.  
Recurrence is especially marked in tricho-  
moniasis and often a problem in moniliasis.  
Highly buffered Aci-jel (pH. 4.0) is unexcelled  
for restoring normal acidity. It is simply  
applied, prolonged in action and non-  
irritating.

Literature and Sample on request

**Ortho Pharmaceutical Limited**

ENGLAND

Makers of Gynaecic Pharmaceuticals

Sole Distributors: ETHICAL PRODUCTS (PTY.) LTD.  
(Ethical Division Johnson & Johnson (Pty.) Ltd.), P.O. Box 727, East London



# NYXOLAN - Hommel

## in OXYURIASIS

Following extensive animal and human clinical trials, 'Nyxolan' now provides entirely non-toxic, freely acceptable, reliably therapeutic management of threadworm infestation

★ ★ ★ ★ ★ ★ ★ ★ ★ ★  
★ 'NYXOLAN'  
★ is non-toxic; dietary  
★ regimen unnecessary.  
★ ★ ★ ★ ★ ★ ★ ★ ★ ★

★ **NYXOLAN** is a new, clinically proved anthelmintic

**COMPOSITION.** 'Nyxolan' is a pleasantly tasting syrup containing 0.4% of aluminium 8-hydroxyquinoline sulphate  $[Al (C_9H_6ON)_2 3H_2SO_4]$

**CLINICAL OBSERVATIONS.** Significant trials in medical institutions show that 'Nyxolan' is a most reliable anthelmintic when used alone, i.e. without supportive purgation, enemas or anal counter-irritants. Abstracts from literature describing clinical results are available on request.

**ADVANTAGES.** 'Nyxolan' is not a dye; it is non-arsenical; it does not induce diarrhoea; dietary regimen is not necessary to its successful employment. It is entirely acceptable, even to infants.

**INDICATIONS.** Present clinical experience with 'Nyxolan' refers to *Oxyuris vermicularis*. Besides its indication in oxyuriasis 'Nyxolan' is the preferred treatment in cases of suspected oxyuriasis, e.g. pruritus, anal eczema, masturbation and genital sensitivity in small girls, "caecal irritation".

**FORM AND POSOLOGY.** 'Nyxolan' is presented in liquid form, the active ingredient being incorporated in a syrup which ensures ready acceptance by children.

Daily dosage of 'Nyxolan' is:—Children under 6 years, 1 dessertspoonful thrice daily; Children over 6 years, 1 tablespoonful four times daily; Adults, 2 tablespoonfuls thrice daily.

**PRESENTATION.** Bottles of 8 fluid oz. net.

★ 'Nyxolan' is widely used in other countries under the name 'Aloxyn' Not publicly advertised.

**HOMMEL'S HÆMATOGEN & DRUG CO.,** 121 NORWOOD RD., LONDON, S.E.24.



Our Sole Agents for SOUTH AFRICA:— Messrs. LENNON LIMITED

P.O. Box 39. CAPE TOWN · P.O. Box 24. PORT ELIZABETH · P.O. Box 266. DURBAN, NATAL  
P.O. Box 928. JOHANNESBURG, TRANSVAAL · P.O. Box 76. EAST LONDON  
P.O. Box 1102. BULAWAYO, Southern Rhodesia · P.O. Box 379. SALISBURY, Southern Rhodesia

arrange for their admission to hospitals where necessary or for their proper supervision at home.

#### THE SCHOOL HEALTH SERVICE

This service continues as a separate one organized by local education authorities, but it is closely co-ordinated with the

National Health Service. It provides for regular medical and dental inspection and some kinds of treatment at school clinics, and has set up Child Guidance Centres for difficult children.

\* Issued by the United Kingdom Information Office, T.4, 17 December 1953. More detailed information is contained in C.O.I. reference pamphlet R.F.P. 2051 *Health Services in Britain*.

### ASSOCIATION NEWS : VERENIGINGSNUUS

#### DR. R. LANE FORSYTH'S VALEDICTORY ADDRESS AT ANNUAL MEETING OF CAPE WESTERN BRANCH

Delivering his valedictory address as past President of the Cape Western Branch of the Medical Association of South Africa at the Annual General Meeting of the Branch on 29 January 1954, Dr. Robert Lane Forsyth, M.B., M.Ch., F.R.C.S.I. said:

In the course of my membership of the Cape Western Branch I have listened to many valedictory addresses given by past Presidents—men of culture, knowledge, wide experience and wisdom. But it was only when I found myself called upon to prepare my own that I realized what a very important event this talk is in the short life of a Branch President.

And so tonight as I speak, my thoughts dwell fleetingly on those who have occupied this Chair in the past, with regret that I am not endowed with the gifts of my predecessors. In spite of this deficiency, I think kindly of those who have placed me in this position at a comparatively early age. Especially so, because the preparation of this address has given me an opportunity for a little introspection, for a little personal stock-taking, and a chance to take out a trial balance, so to speak, of my professional life at a time when such a self-examination might help me to live my remaining years more fully than those of the past. It is the result of some of these musings that I want to pass on to you tonight, and though secure in the thought that you will not strike back, I still pray that I shall not fail those of you who have done me the honour of so kindly coming to listen.

#### DOCTORS' DOUBTS

In the course of the past few weeks, I have put to myself and to many others whom I have met, what I think is a very pertinent question, 'If I had my life over again, would I take up medicine as a career'. Those who know that they are in the only job that could ever have satisfied them are in a happy position, for medicine has rewarded them according to their needs both intellectual and material. They are complete persons and are living a life of fulfilment, and they will not need any of the remarks which may be made in this address. However, there were very many who gave me an emphatic negative, many who expressed doubt, many more who gave a qualified 'yes' to my question, and many who said they were glad that their sons had decided *not* to enter medicine. I have felt that if one could find the real reason why many of my seniors, some of my contemporaries and even some of my juniors were not really enthusiastic about their calling, one would have gone a long way towards getting the answer to the perennial question 'What is wrong with medicine?'

It is extremely difficult in retrospect to say what factors influenced us in the selection for ourselves of medicine as our life's work. For some the motivating force may have been, like my own, a family tradition. For some it may have been a mere accident. For some the long period of study was a challenge to the mind. The mysteries of medicine probably excited the romantic. Some may have seen in medicine opportunities for expressing a sympathetic nature. Some may have had an inborn yearning to be needed and saw in medicine a chance of this desire being fulfilled. However varied the reasons may have been, there is no doubt that one and all looked upon it as a profession honoured above all others—one which brings us into warm personal contact with our fellow beings—one which gives us opportunities to use the heart and its sympathies as well as the head, to help others who are unable to help themselves.

It is true to say that few, even of those who were living in a

medical environment and should have had knowledge of these things, gave a thought to the long hours of toil which were going to be demanded. If we did, the fear of hard work did not deter us. And I vouch that no one thought of medicine as a trade or business. I am sure that prospects of material rewards played little part in our earliest choice.

#### THE CONSTANCY OF MEDICINE

In its essentials, nothing has happened to medicine that should make us inconstant or unfaithful to our early decision to join the throng of great people who were associated with our ancient art. There are still sick and suffering needing the help that only doctors can give—sometimes in the form of a drug, sometimes some sound advice on how to live, sometimes an operation, and only too often a mere word of comfort and understanding. The opportunities are still there for sharing in the joys and sorrows of our fellow men; the challenge to our abilities, humanities and resource still remains.

Nor is this a dull profession—it is a very living craft. New discoveries in all its branches afford the devotee an ever-increasing interest. Improvements in clinical methods are changing guesswork into certainty—and the knowledge that at the end of the search one has arrived at a correct interpretation of the signs and symptoms of an obscure case, should give the added satisfaction that comes with diagnostic triumph—the critical congratulations of our own consciences that are worth so much more than the smile of princes or the felicitations of flatterers.

So if perhaps you will allow that there is nothing much wrong with medicine *per se*, and that its appeal should grow with familiarity, you will concede that there is something wrong either within ourselves or in the manner in which we are practising our art.

#### CAUSES OF FAILURE

I believe that many of those who have decided that, after all, medicine is not really the career for them, say so because of a sense of failure to adorn the profession to which in the enthusiasm of youth they felt they were going to add lustre. These are probably people with the highest ideals and the highest standards of service, and the realization that they have failed to attain the unattainable is grievous unto them, and the feeling steals over them that they would probably have done better in another occupation—all the time failing to appreciate the fact that one does not need to be famous in order to be great. In our contacts we can be instruments of the greatest value, bringing faith, hope, light, joy and consolation, where previously there was doubt, despair, darkness and sorrow.

I believe that in other cases, the blood has run thin as a result of years of work and worry. Overwork plays little part in fatigue. It is over-worry that is the trouble in most cases. Much professional over-worry comes from a lack of knowledge—a feeling of uncertainty, a sense of unfitness to deal with the problems of practice. This sense of incapability not infrequently follows as a result of insufficient reading and time given to study. Osler points out that the habit of study for its own sake is created in the first few years after qualification—during that period of inaction waiting for a practice to build itself. If it is not developed then, in 10 years after qualification the practitioner will be dead mentally as far as medicine is concerned and he will look elsewhere for his real interest—horses, farming or the stock-market. If one feels that one is deteriorating in this way, a period of attendance at post-graduate clinics may revive the failing spirit and recharge it with enthusiasm so that one again experiences the pleasure to be obtained

from our first love. The love for our art only dies when its power of delighting us ceases.

#### REFRESHER COURSES

It is more than necessary that our Universities should provide refresher courses for practitioners. Weekly ward-rounds open to graduates only should be part of our routine contributions to those whom we have turned out—a thousand-mile service at no extra charge so to speak. The advantage will not be unilateral, for our teachers will get a clearer idea of the needs of those who are in the forefront of domiciliary medical practice.

Active membership of our Association, too, can help, not only because it stimulates interest in scientific matters, but because it affords opportunities for social contact between medical men. It does one good to know that we are not unique in our difficulties nor isolated in our ignorance. We shall only get out of our profession what we put into it. Real success is in the striving—the constant striving. Achievement is the empty prize. Oscar Wilde once remarked, 'There are only two great tragedies in life. Not getting what you want—and getting it'. Let us pray therefore, not for the achievement, but for the ability, the enthusiasm and vigour to go on and on in our pursuit for knowledge and more particularly for wisdom.

Then there are some who just find that the never-ending nature of a medical man's day is so exacting and so exhausting that they are becoming one-track minded—that they are neglecting their general education, are making little or no contributions to their homes—that their children are growing up apace without really knowing their parent. I greatly appreciate this point of view, but I feel that there is, if not an answer, at least a reply. In this connection I have merely to ask myself the question, 'How much time do you waste in the course of a day?' to prove to myself that a large measure of my frustrations are self-made, and that the cure lies in my own hands.

The middle-aged doctor has a problem all his own; for often now, for the first time, he begins to feel the strain of practice, and doubts begin to crowd into his mind as to whether he will be able, either physically or mentally, to stay the course. He finds that young men appear on the scene who know things and quote authors he has never heard of, and he begins to feel that perhaps he has got into the wrong job after all. This is surely the very moment when we should keep our minds open and plastic. It is then that we should consort with these young men whose inroads on our practices we begin to fear. For they have much to teach us, even as we have much that they should be willing to learn. Their enthusiasms will infuse new life into us; in return, confident youth will look to us for comfort and guidance when those same enthusiasms have carried them into trouble and despair.

Remember that our Hippocratic oath has made us the creators of our own assassins. If we are kind to them, maybe they will defer the day of our destruction. There is no other way to conserve and prolong our lives of usefulness.

#### FALSE IDEALS

Then there are the few for whom medicine has lost its charm because they have taken to following false gods—those who have begun to judge success by the amount of material possessions they are able to accumulate. Far be it from me to subscribe to the doctrine of the contempt of wealth fairly earned. It would be very simple for me to disdain to acquire that to which I cannot aspire. Nor would I wish to convert you to the conviction that the greatest happiness is to be obtained from the smallest purse. There is no doubt, however, that if medicine is pursued primarily for the purpose of amassing wealth, then the tenderness of spirit which should be so important a feature in the make-up of a medical man stands in danger of being replaced by an unattractive hardness, and the vocational foundation upon which medical practice is based will be sadly shaken. In any case let us not think too deeply for the morrow and its needs, for remember, that by the time financial security is obtained high noon will be well upon us—the beauties of the dawn will have passed us by and all that will remain are the mysteries of the darkening hours and the starlight; and I would remind you that worse than poverty is poorness of spirit, meanness and self-interest.

#### THE DOCTOR'S STATUS

And finally there are those who feel that they belong to a profession that is losing its status. Time was when the doctor was thought

highly of in home, in the city and in the dorp. It is true that things have changed. When I was a youth the doctor was one of the citizens who had had the opportunity of High-school and University education—an advantage that made him (apart from his professional knowledge) a most useful person in the life of the small town. This position has altered, and the medical man of today must shew a definite aptitude before he is brought into the councils of the community. In other words, his status today must be earned and is not his as a right. It is probable, too, that the technical side of our education has been increased at the expense of our cultural life and made us less fitted for public positions.

Status is a queer nebulous thing that comes to those who are 'worthy of respect'. If we are undignified in our treatment of patients, nurses and juniors—if we fall as individuals for the lures held out by business men who wish to use our services and skill as a make-weight in their wage-scale—if by contract we undertake to carry out a volume of work beyond our capacity to do faithfully and well—if by direct word or inference we belittle the efforts of our colleagues—then we are letting ourselves down, and we are letting the side down. Gone is our *esprit de corps* and, since our professional life is a sham, our professional status, too, is gone.

I don't suppose that I have more than touched on the fringe of the causes that produce that tragedy of disappointments—the doctor who is unhappy in the service of medicine. So great is this tragedy and so insidious in its onset that it might be well to consider for a moment or two whether it is possible to do anything to prevent such a malaise striking us down individually.

I would say to the young and care-free: Beware lest the first fine furious flood of ambition carries you into the backwaters of medicine—into a limpid unrippled pool of practice, where you are a spent force—a nonentity—a purveyor of pills, potions and penicillin. Seven years in the study of handling humanity has fitted you for something better than this; but only if you have learnt something from each new experience, from each new mistake. If the pace of your life is too speedy, take your foot off the accelerator or you will arrive at the end of your destination hot and tired, and will have seen nothing of the beauties of the road that brought you there.

#### ADVICE

Develop method in your lives so that you will be able to accomplish more in a day and have time to dawdle by the wayside and enjoy the companionship of your patient and your colleagues. Develop a philosophy early on in life—decide, if you can, the standard of living to which you aspire and live well below it; in this way you will avoid temptation. Perhaps this will not be such a good thing, since we never know the strength of our integrity until we have withstood the actual attack of temptation.

Think about linking up with your colleagues and working in arrangement or in partnership. It is true that our training tends to make individualists of us, and medical men are notoriously bad at working in harness. Nevertheless, I spent some of the happiest years of my own life in partnership—with the late Dr. H. A. Moffat—and I see that many other equally happy associations are developing in the area covered by our Branch. Good luck to them! For the partners will find time for meditation, culture, exercise and hobbies. They will experience the joys of friendship within the profession; and life has no pleasure higher or nobler than friendship.

The only disease that can kill successful partnership is the malady of idleness, out of which grows doubt, suspicion and jealousy. We can only pity the sloth who is as useless to himself as he is to others. Partnerships grow and flourish with mutual understanding and magnanimity, especially in moments of stress when there are changes of fortune or conflict of opinion.

I would recommend that you read regularly of the wisdom contained in the writings of Sir William Osler. His words will be a light in the wilderness to guide your feet.

'To those who have  
The dreary sickness of the soul  
The fear of all bright vision leaving them  
The sense of emptiness, without the sense  
Of an all-abiding purpose anywhere'

T. French

I plead that they, too, will undertake a little self-examination. I ask them to inspect their lives, both professional and private

and to ask themselves how they have failed the noble heritage which was made theirs on that great day when they received their degrees. I ask them to remember that the extent to which they have fallen from their original ideals will reveal itself daily in their work and in their dealings with others. It cannot be hidden; it will manifest itself to all and sundry and they will cease to be worthy to carry the torch which was entrusted to them and whose flame they have allowed to die down.

I ask them to re-dedicate themselves to their calling and, with bold heart and high endeavour, let them accept the burden which is theirs for their short life span, so that all men may say of them as doctors that they are honoured members of a noble profession.

Now that I come to take my leave of this Office, I wish you all and individually full days, and much work to keep you busy, and

the strength to carry the anxiety that goes with it; courage to fight and overcome your doubts and fears; at the end of the day, a bed made soft with the 'poppies of delicious rest', whereon your tired limbs and jaded spirits may revive themselves for the tasks of the morrow; and, finally, a happy home where you are loved and trusted, where great things are expected of you, and where they think you are grand even when you have almost lost faith in yourselves.

Our best thoughts are mostly the products of other men's minds, and I am no exception to this rule. In preparing this address I have been much influenced by the writings of Sir William Osler and Samuel Johnson. Occasionally where a phrase of theirs seemed to me to express my meaning better than I could myself I have not hesitated to use it.

## MEETING OF THE CAPE WESTERN BRANCH

At a meeting of the Cape Western Branch of the Medical Association of South Africa held on 26 February 1954, the President Dr. J. H. L. Shapiro introduced the speaker of the evening, Prof. C. F. M. Saint, whom he described as a pillar of the Medical School of the University of Cape Town, and the key-stone of the clinical arch formed by Professors Crichton, Saint and Falconer.

Prof. Saint then gave a lucid and informative discourse on biliary attacks and jaundice correlating the clinical manifestations with the underlying pathology.

Mr. M. Cole Rous proposed a vote of thanks in which he dwelt upon Prof. Saint's great teaching ability, and suggested that his address should be published in the *Journal*. This was heartily endorsed by the audience.

The Meeting was extremely well attended.

### ANNUAL SOCIAL FUNCTION

The Annual Social Function of the Branch took the form of a Cabaret Dance held at the Weizmann Hall in Sea Point on Wednesday, 27 January. More than 200 couples took part.

The following honoured guests attended the function: The Minister of Health, the Hon. Dr. A. J. van Rhijn and Mrs. van Rhijn, His Worship the Mayor of Cape Town and Mrs. A. F. Keen, Vice-Admiral Sir Peveril William-Powlett, K.C.B., D.S.O. and Lady William-Powlett, the Officer Commanding Cape Command,

Col. and Mrs. L. du Toit, The Principal of the University of Cape Town, Dr. and Mrs. T. B. Davie, the President of the Dental Association, Dr. and Mrs. S. Winer.

The guests of honour were welcomed by the President of the Cape Western Branch, Mr. R. Lane Forsyth, who also took the opportunity of this social gathering to present the Emeritus Membership certificates awarded by Federal Council to the following members of the Branch namely, Dr. F. P. Bester, Mr. W. Lennox Gordon and Dr. H. Kramer. A citation of appreciation of these members' notable service to the Association was read by the Branch President.

The success of the function was due in large part to the active participation of a Ladies' Committee led by Mrs. A. B. W. Ferreira and comprising Mrs. E. B. Malherbe, Mrs. I. Waynik, Mrs. L. Joelson, Mrs. A. W. Spratt, Mrs. H. Hirschon, Mrs. H. Hofmeyr, Mrs. F. Charnock, Mrs. R. F. Maggs, Mrs. D. Thompson and Mrs. J. Joubert.

During an interlude an exhibition of a Spanish Dance was given by Miss Karen Langermann. This item was under the direction of Mrs. P. V. Suckling.

The Convener of the Dance Committee, Dr. W. Emdin, and the other members of the Committee, Drs. D. P. de Villiers, J. H. L. Shapiro, J. G. Louw and Mr. R. D. H. Baigrie are to be heartily congratulated on the smooth organization of this function.

There will be a surplus following the sale of tickets, and this is to be donated to the Benevolent Fund.

## CAPE MIDLAND BRANCH CLINICAL MEETING

The monthly clinical meeting of the Cape Midland Branch of the Medical Association of South Africa held at the Provincial Hospital, Port Elizabeth, on 4 March 1954, took the form of the projection of coloured slides illustrating clinical cases. Members of the Dental Association attended by invitation. Dr. F. H. Counihan F.R.C.S. was in the chair.

Dr. P. Jabkowitz presented a case of coarctation of the aorta with a well-marked collateral circulation.

Dr. F. Benjamin showed a case of full-time extra-uterine pregnancy. The coloured slides showed the stages of the operation very clearly. The mother and child are both doing very well.

Dr. James Miller showed pictures of a case of extra-uterine pregnancy where a 36-week foetus had ruptured through an old Caesarian scar. The patient settled down and the foetus was removed several days later.

Dr. V. Solomon showed coloured films of the muco-cutaneous-ocular syndrome (Stevens-Johnson). His cases all cleared up on cortisone.

Dr. T. Perl and Dr. H. O. Stirton showed an adamantinoma of the jaw. The slides showed partial excision of the mandible and its replacement by an acrylic prosthesis, which was cast before the operation.

Mr. L. Mirkin and Dr. P. Perl showed slides of the operation of the replacement of one side of the mandible by the 7th rib. A metal capsplint with connecting rods was adapted in an ingenious way to hold the rib until union had taken place.

Dr. J. G. K. Dean showed slides of the cutaneous forms of porphyria.

Mr. E. Colley showed slides of the implantation of testicles in the thighs after the avulsion of all the skin of the scrotum and penis. A zig-zag skin graft was done on the penis to allow for stretching.

Dr. P. Perl and Dr. W. H. Mirkin showed slides of the use of obturators for cleft-palate. Their method was early closure of lip defect, then to wait until the child reached the age of 5 so as not to interfere with the growth centres and to allow as much lateral growth to take place as possible. If there were not sufficient tissues for comfortable closure the patient was given a vitallium obturator, which ensured that no regurgitation into the eustachian tubes took place, and the voice became practically normal with training.

Dr. T. Perl showed a case of a floating maxilla which had been badly fractured. The slides showed the position of the Woodward splints. Turnbuckles were used in the apparatus and a metal capsplint. In the final stages the films showed intermaxillary elastics to improve articulation.

The following slides were also shown:

Fracture of the mandible and maxilla. The film showed the patient's own dentures being ligated to the alveolus by intraosseous wiring and circumferential wiring, and the two plates of teeth were then fixed together ensuring total stability.

For a patient who had no eye-socket at all a prosthetic appliance was shown attached to a pair of spectacles which gave the appear-

ance of an almost normal eye. A slide was also shown of a prosthetic nose attached to a pair of spectacles, the only disability being the removal of the prosthesis when the patient had to blow his nose.

Coloured slides showing the following tumours were also shown: Pregnancy tumour of mouth; Giant-celled tumour of mouth; Carcinoma of the tongue; Squamous-celled carcinoma of the

alveolus; Melanotic sarcoma of the palate; Carcinoma of the palate.

The Chairman moved a vote of thanks to Drs. P. and T. Perl for their help in taking and showing the slides.

Dr. H. D. Sturton was elected Chairman for the next Clinical Meeting.

### PURCHASE OF INSTRUMENTS BY DOCTORS OVERSEAS

Enquiries have been made by the Associate Secretary of the Medical Association of South Africa from the Director of Imports and Exports, P.O. Box 7795, Johannesburg, on behalf of medical practitioners who desire to obtain import permits which would enable them, while overseas, to purchase new instruments or equipment which they may see in use. The official dealing with these matters has sent the following reply which is published with his permission, so that doctors proceeding overseas, or those placing orders direct with overseas suppliers, may be fully conversant with the Import Control Regulations:

'... I have to advise that your request has received careful consideration, but I regret that it will not be possible to issue open permits for this purpose.

'I would like to explain that applications from medical prac-

tioners who desire to purchase instruments they have seen overseas, and cannot be supplied by an importer in the Union, have always received favourable consideration.

'I would suggest, therefore, that when a medical practitioner is overseas and decides on instruments not available to him in the Union, and which no dealer in the Union can obtain for him, he can make an application here for a permit to cover them, and would then be in a position to give the necessary information regarding the instruments and f.o.b. cost thereof, for the amount actually required. If the doctor makes the application in good time the permit, if approved, can be sent back to him overseas if he wishes to bring the instruments with him, or, alternatively, can be sent to his South African address for the goods to be shipped on to him'.

### THE BENEVOLENT FUND : DIE LIEFDADIGHEIDSFONDS

The following contributions to the Benevolent Fund during February, 1954, are gratefully acknowledged.

*Votive Cards in Memory of:*

Dr. Otto Hooper by Dr. C. Weinberg.  
John Shannon by Dr. C. Weinberg.  
Mrs. James Black by Dr. and Mrs. L. I. Braun, Dr. and Mrs. A. W. Sichel, Drs. Seymour, Heymann and Javett. The S.A. Medical and Dental Council.  
Dr. R. Meyerstein by Dr. A. E. Pinniger, Dr. Morris J. Cohen.  
Dr. D. Saayman by Dr. A. I. Goldberg.

Total Amount received from Votive Cards: £12 1 6

<b>Donations:</b>		Dr. W. Fabian
Members of Cape Western Branch (Collection Box)	4 6 0	Dr. J. Joseph
Proceeds of annual Jones-Philipson Golf Competition organized by Drs. Hamilton Bell and Jack Gelb	7 5 0	Dr. P. M. H. Kent
Medical Discussion Club	10 10 0	Dr. N. M. L. Lund
Members of Northern Transvaal Branch (Collection Box)	6 11 6	Dr. M. Maister
Dr. A. G. Sweetapple	2 2 0	Dr. E. van Wyngaard
Dr. R. P. Stafford	1 1 0	Dr. B. Epstein
Dr. J. van Schalkwyk	10 0	Dr. P. R. Malherbe
Dr. M. G. Woolff	1 1 0	Dr. J. A. Currie
Dr. R. D. Osler	10 0	Dr. G. H. Vos
Dr. A. F. Stewart	16 6	Dr. C. L. L. Murray
Dr. R. L. Baikie	1 1 0	Dr. L. L. Nel
Dr. C. de W. Meintjies	1 1 0	Dr. F. G. Sharing
		Mr. W. P. Steenkamp, Jr.
		Dr. S. J. Adendorff
		Dr. A. H. Baxter
		Dr. A. M. Dick
		Dr. H. S. Edwards
		Dr. S. Kahn

*Services Rendered to:*

Daughter of Dr. Nathan Finn by Dr. J. A. C. G. Daneel.  
The Late Mrs. R. Wolfowitz by Drs. Suzman, Teeger and Davimes.  
Mrs. H. Wolfowitz by Drs. A. Teeger, A. Watt, M. M. Suzman and M. Weinbren.  
Mrs. D. Kingsley Jones by Dr. Grove.  
Mrs. J. C. Koornhof by Drs. P. Connan, J. W. van der Riet and C. V. van der Merwe.  
Dr. C. Hauptfleisch by Dr. H. J. Besselaar.  
Mrs. Dr. C. Hauptfleisch by Dr. E. Samuels.

Total Amount received from Services rendered:	£20 11 6
Dr. H. A. Kalley	1 1 0
Dr. J. Kleinman	1 1 0
Dr. R. R. MacKenzie	1 1 0
Dr. H. E. C. Corkney	5 0
Dr. M. M. Suzman	5 5 0
Dr. L. Tomory	1 1 0
Dr. E. M. Broome	15 6
Dr. B. M. Porter	1 1 0
Dr. E. Clyde Morley	1 1 0
Dr. H. A. Edwards	1 1 0
Dr. A. C. L. Grantham	1 1 0
Dr. D. H. Hooey	1 1 0
Dr. D. S. McCall	1 1 0
Dr. A. L. Wilson	1 1 0
Dr. S. Annecke	3 3 0
Dr. C. Weinberg	10 0
<b>Total</b>	<b>£107 17 6</b>

### DR. H. A. MOFFAT MEMORIAL FUND

The following contributions to the Dr. H. A. Moffat Memorial Fund during February, 1954, are gratefully acknowledged:

Dr. F. Charnock, Cape Town, per Dr. Jack Abelsohn	£1 1 0
Dr. P. Oates, Pinelands, per Dr. Jack Abelsohn	1 1 0
Dr. J. Castle, Wynberg, per Dr. Jack Abelsohn	1 1 0
Dr. A. Michael, Cape Town, per Dr. Jack Abelsohn	1 1 0
Dr. L. Babrow, Cape Town, per Dr. Jack Abelsohn	2 2 0

Dr. Cecil Goldberg, Wynberg, per Dr. Jack Abelsohn	2 2 0
Dr. F. D. J. Viljoen, Green Point, per Dr. Jack Abelsohn	1 1 0
Col. Dr. C. W. Comrie Sharp, Pinelands, per Dr. Jack Abelsohn	10 10 0
<b>Total</b>	<b>£19 19 0</b>

# **Billions Of Red Cells Every Day!**

*Each Capsule contains:*

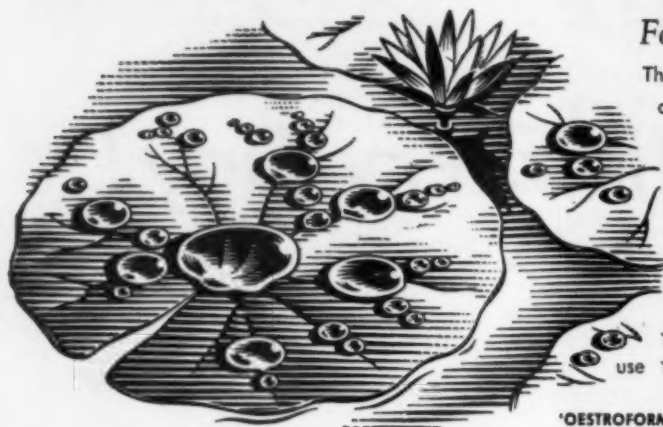
Vitamin B <sub>12</sub> Crystalline	...	...	...	...	...	10 mcg.
Folic acid	...	...	...	...	...	1 mg.
Ferrous sulfate U.S.P. (5 gr.)	...	...	...	...	...	300 mg.
Liver Fraction 2 N.F.	...	...	...	...	...	75 mg.
Powdered Stomach (not U.S.P.)	...	...	...	...	...	75 mg.
Thiamine hydrochloride	...	...	...	...	...	2 mg.
Riboflavin	...	...	...	...	...	2 mg.
Pyridoxine hydrochloride	...	...	...	...	...	1 mg.
Ascorbic acid	...	...	...	...	...	50 mg.

# **REDICYTE** CAPSULES

**Sharp & Dohme**

P.O. BOX 5933, JOHANNESBURG

# Aqueous Suspensions of B.D.H. Sex Hormones



*For quicker action and prolonged effect.*

These new B.D.H. Products consist of suspensions of oestradiol monobenzoate, progesterone and testosterone propionate respectively in saturated aqueous solutions of the hormone. Aqueous suspensions have the following advantages:—

- ★ Action is more prompt than that obtained with oily solutions
- ★ Duration of effect is somewhat longer than with comparable doses of oily solutions
- ★ Finer needle can be used
- ★ Syringe need not be thoroughly dried before use
- ★ Absence of oil makes syringe easy to clean.

**'OESTROFORM' AQUEOUS** Oestradiol Monobenzoate B.P. in aqueous suspension (Ampoules containing 1, 2 and 5 mg. in boxes of 6 ampoules).

**'LUTOFORM' AQUEOUS** Progesterone B.P. in aqueous suspension (Ampoules containing 5, 10 and 25 mg. in boxes of 6 ampoules).

**'TESTAFORM' AQUEOUS** Testosterone Propionate B.P. in aqueous suspension (Ampoules containing 5, 10 and 25 mg. in boxes of 6 ampoules, and 50 mg. in boxes of 3 ampoules).

BRITISH DRUG HOUSES (SOUTH AFRICA) (PTY.) LTD.  
123 JEPPE STREET, JOHANNESBURG

L O N D O N   •   T O R O N T O   •   S Y D N E Y   •   B O M B A Y   •   A U C K L A N D

**PREVENTION  
AND TREATMENT OF  
COLDS WITH NEW  
ORAL VACCINE**

**IMUVAC**



**IMUVAC**, containing Pneumococci, Haemophilus influenzae, Streptococci, Staphylococci, Bacillus mucosus capsulatus and Micrococcus catarrhalis, is an oral vaccine for the prevention and treatment of colds and infections of the upper respiratory tract.

Studies indicate the effectiveness of oral vaccines to be between 60% to 80%.

Full information available on request

**A SOUTH AFRICAN PRODUCT  
MADE BY:**

**SAPHAR**

**LABORATORIES LTD.**

P.O. Box 568  
CAPE TOWN

P.O. Box 2383  
DURBAN

P.O. Box 789  
PORT ELIZABETH

P.O. Box 256, JOHANNESBURG

## ADVISORY SERVICE FOR DOCTORS VISITING BRITAIN

The Empire Medical Advisory Bureau has published again (December 1953) its annual Summary of Regulations for Post-graduate Diplomas and Courses of Instruction in Post-graduate Medicine.

The introductory section is as follows: '.... The Bureau has been established by the Council of the British Medical Association with a view to welcoming and providing a Personal Advisory Service to practitioners visiting the United Kingdom, particularly those from the Dominions and Colonies. The Council has appointed the Committee of Management to organize and develop the Bureau and allotted funds for this purpose.

'An Advisory Committee has been formed and is fully representative of Government Departments and Societies interested in the welfare of Empire and Overseas visitors during their stay in this country for post-graduate or other purposes.

'One of the main objects of the Bureau is to welcome our overseas visitors and make them feel at home and it is often possible to arrange for visitors to be met on arrival, but in any case the visitor is cordially invited to contact the Bureau as soon as possible after arrival and talk over with the Medical Director any points on which he may need advice or assistance.

'Post-graduate Education. To meet the needs of those visitors mainly concerned with enlarging their professional knowledge, detailed information is available on post-graduate education facilities and on the courses of study necessary for higher qualifications, and the visitor can be put in touch with organizations and authorities who provide post-graduate instruction.

'The visitor who wishes to see something of the latest medical and surgical techniques can be put in touch with the appropriate experts in these.

'Accommodation. A register of hotels and lodgings is maintained by the Bureau and every effort is made to help visitors solve the problem of finding somewhere suitable to live. If requested, the Bureau will provisionally book accommodation in an hotel or boarding house, and the visitor is expected to confirm the booking direct with the proprietor. The Bureau is glad to assist visitors to obtain furnished houses or flats by providing addresses of these and of estate agents and making preliminary enquiries, but the Bureau is unable to carry out final negotiations on behalf of visitors.

'Private Hospitality. By social functions and in other ways practitioners from the Dominions and Colonies are enabled to meet each other and prominent members of the profession in this country. Several doctors have notified the Bureau of their wish to entertain overseas visitors—usually for weekends in their homes—thus giving visitors an opportunity of making real contacts with families and homes during their stay.

'General Information. Regulations concerning food rationing, customs duties, etc., affect visitors from overseas and information can be given on these or any other personal matters to enable the visitor to feel at home as soon as possible. A wide range of information about facilities for sport, travel, exhibitions, theatres, etc., is available and will be of assistance to visitors in making the most of their leisure.

'Visitors may consider there are ways in which the Bureau may be of service to them, or subjects on which they would like advice which are not noted above and, if so, they should not hesitate to make their requests known.

'It will enable the Bureau to be of most service if a visitor gives as long notice as possible of his intended visit to this country and information on the following lines would be useful—projected date of arrival, mode of travel, whether accompanied by wife, period of stay, main and other objects of visit and requirements from the Bureau. On arrival a letter of introduction from the local Hon. Secretary of the visitor's Medical Association, whilst not essential, would be welcome and may be helpful if a visitor requires references when seeking furnished flats.

'All communications should be sent to Brigadier H. A. Sandiford, M.C., M.B., Ch.B., D.P.H., Medical Director, Empire Medical Advisory Bureau, B.M.A. House, Tavistock Square, London, W.C. 1, England.'

The remainder of the 24 pages in the Summary comprise a vast amount of information valuable to medical men who are visiting the United Kingdom for post-graduate study or to obtain post-graduate diplomas.

A copy of the Summary is available for consultation at each of the Medical Schools in South Africa.

## PASSING EVENTS : IN DIE VERBYGAAN

## S.A. MEDICAL CONGRESS 21-26 JUNE 1954 PORT ELIZABETH

Members are reminded that if they intend being present at the South African Medical Congress to be held in Port Elizabeth from 21 to 26 June 1954, they should complete the intention cards which were recently sent to them and return them as soon as possible to the Organizing Secretary, South African Medical Congress 1954, P.O. Box 1137, Port Elizabeth.

## NUMBER OF REGISTERED PERSONS

On 31 December, 1953, the numbers of names on the registers kept by the South African Medical and Dental Council were:

Medical Practitioners .. ..	6,437
Interns .. ..	519
Dentists .. ..	1,078
Medical Students .. ..	1,283
Dental Students .. ..	217

On 31 December, 1934 (19 years ago), the number of medical practitioners on the register was 2,609. At that time 19% of the registered medical practitioners held qualifying degrees from South African Universities; to-day the figure is 63%.

The numbers of dentists on the register 19 years ago was 713. At that time 2.5% of them held South African degrees; to-day the figure is 34%.

In the year 1953, 193 names of medical practitioners were removed from the register (49 by reason of death) and 470 names were added (29 of them being restorations). Of dentists 38 were removed (7 deaths) and 84 were added (9 restorations).

Of medical students 309 were added to the register in 1953 (7 being restorations) and of dental students 69.

The numbers of other classes of registered persons were as follows:

Chiropodists 33, Dietitians 3, Medical Technologists 54, Masseurs 134, Physiotherapists 244, Occupational Therapists 23, Optometrists 1, Orthopaedic Mechanics and Surgical-Appliance Makers 35, Orthoptists 1, Radiographers 18, Diagnostic Radiographers 1, Speech Therapists 17, Food Inspectors 45, Health Inspectors 51.

## UNION DEPARTMENT OF HEALTH BULLETIN

Report for the 7 days ended 25 February.

**Plague, Cape Province.** No further cases have been reported from the Carnarvon district since the notification of 28 January, 1954. This area is now regarded as free from infection.

**Smallpox:** Nil.

**Typhus Fever, Cape Province.** One (1) Native case in the Mwaca location in the Mount Ayliff district. Diagnosis confirmed by laboratory tests.

**Epidemic Diseases in other Countries:**

**Plague:** Nil.

**Cholera in Chalna, Chittagong, Dacca (Pakistan); Calcutta, Madras, Nagapattinam, Tiruchirappalli (India).**

**Smallpox in Karachi, Lahore (Pakistan); Bombay, Calcutta, Cochin, Delhi, Kanpur, Madras (India); Haiphong, Hanoi, Saigon-Cholon (Viet-Nam); Phnom-Penh (Cambodia).**

**Typhus Fever in Baghdad (Iraq).**

## TRANSVAAL RADIOLOGICAL SOCIETY

Office bearers of the Transvaal Branch of the Radiological Society of South Africa elected at the annual general meeting on 25 Feb.

1954, were as follows: Chairman, Dr. H. Jackson; Vice-Chairman, Dr. M. Fainsinger; Secretary-Treasurer, Dr. C. Komins; Committee, Dr. J. Nel, Dr. I. A. Brotman, Dr. D. Morris and Dr. F. MacLachlan.

## BOOKREVIEWS : BOEKRESENSIES

## REPRODUCTIVE ANATOMY

*Gynaecological and Obstetrical Anatomy and Functional Histology.* By C. F. V. Smout, M.D., M.R.C.S., and F. Jacoby, M.D., Ph.D. (Pp. 336 + vii with 185 figures. Third Edition. 35s.) London: Edward Arnold and Company, 1953.

*Contents:* Milestones in Midwifery. 1. The Bones of the Pelvis. 2. The Articulated Pelvis. 3. The Ligaments and Joints of the Pelvis. 4. The Walls of the Pelvis. 5. The Pelvic Connective Tissue and Fascia. 6. The Ovary and its Development. 7. The Histology of the Ovary. 8. Ovarian Endocrine Function and its Control. 9. The Anatomy of the Uterine Tube. 10. The Histology of the Uterine Tube and the Fate of the Ovum after Ovulation. 11. The Anatomy of the Uterus and Vagina and their Development. 12. The Histology of the Uterus and Vagina. 13. The Urinary and Alimentary Tracts Within the Pelvis and their Development. 14. The External Genitalia—Their Development and Structure. 15. The Perineum. 16. The Pelvic Lymphatic System. 17. The Innervation of the Pelvic Viscera. 18. The Placenta. 19. The Anatomy of the Foetus in Relation to Childbirth. Index.

This rather large book on reproductive anatomy comes from the hinterland of England, but it is good and valuable. The present third edition is nearly twice as bulky as the first, but not twice as useful. Nor is one's enthusiasm for the early volume enlarged correspondingly for the current one. The portion of the book that was truly appreciated previously was the anatomical, but now several good anatomical illustrations have been omitted and the beautiful colour of the remainder has disappeared.

The additions to the work are the result of very extensive reading of the literature by the authors. A modest bibliography of 151 contributions has become a formidable collection of 444 references. This has inevitably changed the perspective and power of presentation of the subject.

In an undergraduate course of systematic lectures on obstetrics and gynaecology 30 to 40 lectures have to be devoted to the anatomy and physiology of the different aspects of female reproduction. Thus Smout and Jacoby's book should fill a great need and take the place of these elementary lectures. For the purpose it must deal vigorously with substantial fact, and the question would arise as to whether the dreaminess of endocrinology should be included in a work dealing with so concrete a theme as the anatomical.

The present work has the potentiality of being authoritative and truly excellent, and it ought to be the most valuable on the gynaecological shelf.

It is sincerely hoped that this 'anatomy' will become the standard work of its kind in our language. To provide the leavening effect required in the judgment and presentation of new knowledge; it will be necessary to gain the co-operation of a well-informed clinician; a mere uncritical review of what this and that author of a paper have written is unwholesome food for the undergraduate. The authors will have to speak with a stronger voice on their own subject of anatomy, and the work will be shorter if it deals with the reality of precise and true anatomy.

There are too many weaknesses in the anatomy, the fault being due to repetition of errors from previous standard works. An anatomist surely is not guided by what is taught in England or Birmingham, but what he knows from his own pursuit of the subject to be correct.

Pelvic axes and their influence on labour are dealt with much more intelligibly than elsewhere, but are not quite as simple as presented. Clinical investigators are quoted on pelvic morphology with a respect which does not become an anatomist, and repeatedly the clinician misleads the scientist in this chapter.

Nevertheless, the straightforward anatomy is beautifully presented in word and drawing. A new twist is introduced into the description of the pelvic fascia which is unwelcome; the relationship of the clitoris to the pubes is still wrongly shown; the anatomy of genital prolapse is nearly perfect, but the authors do not realize it and fail to give the necessary emphasis; and the chapters on the placenta and the foetus are too elementary and prosaic. The future

of this work is assured, but it must be raised from good to authoritative.

26 February 1954

O.S.H.

## BEROEPSIEKTES

*Geneeskundige Onderzoekingen en Mededelingen Omtrent Beroepsziekten.* Overdruk uit het Centraal Verslag der Arbeidsinspectie over het jaar 1951. s'Gravenhage: Staatsdrukkerij, 1953.

Hierdie pamflet gee 'n beknopte skets van beroepsiektes, gedurende 1951 aangemeld, asook van die chemikalieë wat daarvoor verantwoordelik was. Dis interessant dat in Holland wetgewing i.v.m. beroepsiektes en ongevallen nie tot Industrieë beperk is nie maar uitgebrei is om werksaamhede in die Landbou en Tuinbou in te sluit.

Dit skyn asof mediese keuring van arbeiders voor indiensneming 'n wetlike instelling is wat goeie Socio-ekonomiese vrugte dra.

Dit sou interessant wees om te weet hoe die mediese profesie onder die Arbeidswet ingeskakel word—ook die samestelling en werksaamhede van instellings soos die *Centraal Bureau voor keuringen op Medisch-hygienisch gebied, Het Instituut voor Preventieve Geneeskunde en De Organisatie voor Toegepast Natuurwetenschappelyk Onderzoek—Sectie Industrie van die Afdeling Gezondheidstechniek.*

Hoewel hierdie pamflet ver te beknop is om van wetenskaplike belang te wees is dit tog waardevol in die opsig dat dit duidelik aantoon hoe wakker Holland staan ten opsigte van die gesondheid en welvaart van die arbeider, waarop, op sy beurt, die welvaart van Land en Volk berus.

## TUMOUR PATHOLOGY

*Atlas of Tumor Pathology. Section X—Fascicle 35. Tumors of the Central Nervous System.* By James W. Kernohan, M.D. and George P. Sayre, M.D. (Pp. 129 with 126 figures. 90 cents.) Washington, D.C.: Armed Forces Institute of Pathology, 1953.

*Contents:* 1. Introduction. 2. Tumors of Nervous Tissue (a) Gliomas. (i) Astrocytomas. (ii) Ependymomas. (iii) Oligodendrogliomas. (iv) Medulloblastoma. (v) Neuroblastoma. (vi) Subependymal Glioma. (b) Neurilemoma. 3. Tumors of Mesenchymal Tissue. (a) Blood Vessel Tumors. (i) Angiomatous Malformations (ii) Angioblastomas. (b) Sarcomas. (c) Lipomas. (iii) Meningiomas. 4. Tumors of Developmental Defects. (a) Parapharyngeal Cyst. (b) Chordoma. (c) Dermoid and Epidermoid Tumors. 5. Tumors of the Pineal Body. (a) Pinealomas. (b) Teratomas.

This fascicle is a further contribution to the Atlas of Tumour Pathology published by the National Research Council of America.

Kernohan and Sayre, drawing on the wealth of material from the Mayo Clinic, have produced an excellent book, which will do a great deal towards the understanding of this group of tumours. In the past, the cumbersome nomenclature, and the fact that primary tumours of the central nervous system have been considered rare, have probably accounted for the fact that less attention has been devoted to these neoplasms than to those in other parts of the body.

The authors point out that 9% of all neoplasms removed surgically at the Mayo Clinic were located in the central nervous system or its coverings—the meninges. During the same period carcinomas of the stomach and rectum were about 10%, carcinomas of the colon about 9.5%, and carcinomas of the breast almost 10%.

The text is concise, and the book is amply illustrated with excellently-reproduced photographs and microphotographs clarifying the histological features on which the classification is based.

The fact that the authors have graded the group of tumours of the astrocyte series into 4 groups very much simplifies the understanding of these malignant tumours, especially as it is well known that one tumour may be classified into different categories if sections

are taken at different parts of the tumour; e.g. the features of an astrocytoma may predominate in one portion, whilst in another the diagnosis of glioblastoma may be made.

Although the grading of these tumours is somewhat arbitrary, it simplifies the surgeon's task in deciding the prognosis, for as the authors point out, the period of survival after tumour-removal may very well be correlated to the degree of malignancy if this classification is applied.

This fascicle is of greatest value to the neuro-surgeon and pathologist, but to other members of the medical profession who may read it it will serve to emphasise the fact that primary tumours of the brain and spinal cord are not infrequent, as is generally thought.

H. de V. H.

#### EDIBLE AND POISONOUS MUSHROOMS

*Some South African Edible Fungi.* By Edith L. Stephens. (Pp. 35 with illustrations. 6s. 0d.) Cape Town: Longmans, Green and Co., 1953.

*Contents:* 1. Foreword. 2. Introduction. 3. Mushroom Cookery. 4. True Mushrooms. 5. The Field Mushroom. 6. Three Other Mushrooms. 7. The Shaggy Ink-Cap. 8. Lactarius or Pine Rings. 9. The Cape Russula. 10. The White Parasol. 11. The Blusher. 12. Volvaria. 13. The Cep. 14. The poplar Boletus. 15. Some Other Boletus. 16. The Little Puff-Ball. 17. The Sulphur Shelf. 18. Growing Mushrooms. 19. Drying and Preserving Fungi.

Mushrooms are a favourite food with many people, but the thought always springs to mind that gastro-intestinal upset or more serious poisoning may follow their ingestion. In these days most of those who eat these fungi obtain their supplies in tins or in the fresh state from certain dealers.

For those who would like to make use of the kinds they can collect in forest or veld this book (*Some South African Edible Fungi*) will be found of great value for the information it contains—mainly for those species growing in the S.W. Cape region, although all those described also occur in other parts of South Africa.

There is no easy way of telling edible from poisonous fungi; popular tests (peeling, silver spoon, etc.) are useless and dangerous. Apart from elaborate scientific tests the only way is to learn to know them by sight, and one important step would be to study the facts about fungi in this little book.

In clear and concise description with excellent colour-illustrations

to resemble the real thing there should be no difficulty in deciding whether the particular fungus in hand is edible. Should you desire to know how they should be cooked, the recipes given for fried, baked or stewed mushrooms may be consulted, as also those for mushroom frikkadels, soup and sandwiches.

A great service has been performed in the preparation and publication of this book and its companion volume which deals with the poisonous varieties of fungi.

*Some South African Poisonous and Inedible Fungi.* By Edith L. Stephens. (Pp. 31 with illustrations. 6s. 0d.) Cape Town: Longmans, Green and Co. Ltd. 1953.

*Contents:* 1. Foreword. 2. Introduction. 3. A Matter of Life or Death. 4. The Death Cup. 5. The Cape Death Cup. 6. The Fly Agaric. 7. The Panther. 8. The Yellow-Staining Mushroom. 9. The Copper Trumpet. 10. The Green-Lined Parasol. 11. Three Poisonous Inocybes. 12. Poison Pie. 13. The Purple-Stemmed Russula. 14. The Orange Tuft. 15. The Sulphur Tuft. 16. Dye Balls.

Doctors, like other mortals, may or may not like mushrooms as an article of diet, and can be assisted in their selection of edible fungi by the companion volume dealing with this subject. (*Some South African Poisonous and Inedible Fungi*). But, whether they like mushrooms or not, doctors must be prepared to give correct, it may be life-saving, treatment to those who have ingested the poisonous varieties of fungi.

The book under review gives essential information in straightforward language about those mushrooms which are poisonous. To aid in their identification excellent illustrations in natural size and colour are provided.

Within a short time the reader of this book (even in emergency) can determine which variety of mushroom has been eaten and what steps to take to eliminate the offending agent or to counteract its effects. The 2 Death Cup varieties are notorious as liver poisons, the 3 poisonous Inocybes contain muscarine, while others such as *Amanita muscaria* (a misleading name) and *Amanita pantherina* contain the so-called myceto-atropine.

It is therefore important to know which particular mushroom was eaten for the correct steps to be taken in the prevention or treatment of liver damage, muscarine poisoning or atropine poisoning.

Towards this end this book should therefore be in the 'doctor's bag'. N.S.

#### CORRESPONDENCE : BRIEWERUBRIEK

##### WELL-TO-DO PATIENTS AT GROOTE SCHUUR HOSPITAL

*To the Editor:* Groote Schuur Hospital is a 'closed' institution, which means that by Provincial regulation it is not open to patients who are able to pay for private medical attention. In fact, many who can afford private care are being admitted constantly.

There was, for instance, the woman who expressed indignation at the delay in her admission for an appendix operation because it interfered with her plans for a holiday in Sweden. There was the patient who flew down from South-West Africa with a letter from his doctor. He was a wealthy farmer, who willingly entered a private nursing-home when told the facts, but said that he did not know he was not entitled to free service.

Out-patients come for penicillin injections, diabetic treatment and so on who can well afford to pay. Patients occupy beds in medical wards needed for those who genuinely need free treatment.

Theoretically, a patient must present a letter from a Doctor, Minister of Religion, Justice of the Peace or Magistrate stating the patient's inability to pay for private treatment. In practice these are given far too light-heartedly and the system is open to abuse.

What happens is this. Mr. Jones has his appendix removed in a private nursing-home, pays his doctors and his expenses in the home. His neighbour, Mr. Smith, goes to Groote Schuur and pays nothing. Mr. Jones in addition to paying his own way is taxed to pay for his neighbour Mr. Smith.

At Groote Schuur we have come to think that the fault lies with the Provincial authorities, who have not sufficiently publicized the fact that Groote Schuur is a 'closed' institution. Most people genuinely believe that free hospitalization means free treatment for everyone from millionaire to factory-worker.

For this, of course, we have to thank the miserable muddle of our so-called health services, with each Province chopping and changing its rules and regulations, so that the public have no clear idea where they stand. Even doctors do not know that karakul farmers from South-West Africa should not be sent to Groote Schuur to have their gall-bladders removed.

G. Sacks, F.R.C.S.

National Mutual Building  
Church Square  
Cape Town  
8 March 1954

##### CRITICISM IN THE JOURNAL

*To the Editor:* The publication of correspondence about Dr. D. G. Steyn's article on Nutrition<sup>1</sup> in the Journal makes very interesting reading. One has hitherto hesitated harshly to criticize an article written by a colleague who occupies a chair at a University, but as he has invited criticism one can now comment with a clear conscience. Dr. Steyn writes that he invariably sends his reprints to prominent people all over the world from whom he requests criticism. It would have been better if he had submitted this article

to his friends before publication and so obviated such blistering comment from a learned and distinguished former Editor of the *Journal* who has described the article on Nutrition as 'gibble-gabble.'

Dr. Steyn's three points on the conduct of scientific research and the interpretation of results should not need emphasis by a University professor, as we all agree that they are basic and indispensable desiderata for all scientific investigators. As we do not know what Dr. Steyn's friends at large have said about his article, and he has not as yet told us, it will not be out of place to discuss one or two points. To answer the article in detail would need an editorial tolerance which cannot be expected, as the answers would occupy all the pages of a single issue of the *Journal*. However, I shall choose three points at random, knowing full well how difficult it is to pin down generalities.

1. The opening sentence of the article states: 'The time is long overdue when we should discontinue the old-fashioned way of treating disease purely by the administration of drugs without sufficiently considering the diet of the patient.' Which practitioner of standing today has to be reminded of such a remark? In England since 1939, to quote one example, the subject of diet and its role in disease has received tremendous publicity, and in our own *Journal* the statistically-minded amongst us can calculate how many dozens of pages have been devoted to this subject. It is absurd to be told by a non-medical contributor that we are not sufficiently aware of the role of diet in the causation of disease.

2. The paragraph on allergies convinces me that Dr. Steyn's interpretation of, and conclusions drawn from, the literature are not reasonable and sound. He states that 'it is this slight acidosis together with the complex deficiencies associated with a diet consisting largely of white bread and very acid cool drinks which renders many individuals susceptible to the various allergic manifestations and to infections, especially acute and chronic colds, tonsillitis, sinusitis, etc. . . .'. This observation is pure theory, not scientific, and has little basis in fact.

3. References are appended to scientific articles so that the reader can, if need be, refer personally to them and extend his reading. Reference 6 is a Memo to the Minister of Health; Reference 7 is a Memo to an *Ad Hoc* Committee; Reference 40 is a Memo to the Department of Health; Reference 57 is not a reference at all. Reference 5 is not a reference either, as apparently it refers to a lecture delivered in 1948, which has not been published. These 5 references can thus never be seen by the reader at all. In addition, references 2, 3, 4, 41 are all in the Press, and also cannot be read. These references to 4 articles by the Author all in the Press are certainly evidence of his activity, but he leaves the reader at a great disadvantage.

This article should have been drastically revised before submission for publication in a medical journal.

I. Schrire, M.R.C.P. (Lond.), F.R.S. S.Af.

1 Hof Street  
Cape Town  
6 March 1954

<sup>1</sup> Steyn, D. G. (1953) *S. Afr. Med. J.* 27, 741.

#### DR. SHAPIRO REPLIES

*To the Editor:* It was not my intention or desire to engage in correspondence in a clinical journal with a non-medical contributor. Both my letters (published in the *Journal* dated 27 February 1954) called for an explanation from the editor, not the author.

However, as the author insists on putting his questions to me, I wish to draw attention to the following examples chosen entirely at random from Professor Steyn's article in the issue of 29 August 1953.

1. On p. 743, under 'Bacterial and Viral Infections', Professor Steyn makes the categorical and unqualified statement that 'the prevalent heavy starch diet (white bread) and acid drinks are in a large measure responsible for the prevalence of . . . tuberculosis . . .'.

This unsupported claim needs no comment in a medical publication.

2. For good measure Professor Steyn adds that tonsillitis and sinusitis are also due to these causes. He does not specify

whether he is dealing with acute or chronic sinusitis, or allergic or pyogenic varieties.

Any further remark other than quotation is equally superfluous.

3. Under the general heading of 'Cancer' Professor Steyn relies on 6 personal references to establish 'the importance of an adequate and well-balanced diet in the prevention of cancer'. He does not indicate in his text whether he is discussing liver cancer, breast cancer, etc. Such vague generalizations are particularly to be regretted when made about malignant disease. This is the more so as 2 of his 6 references are inaccessible private memoranda to a government department and 2 more of them refer to communications of his own in the lay press, some of them actually unpublished at the time Professor Steyn submitted his MS.

A fifth of these 6 references turns out to be a letter published in this *Journal* in 1948 at p. 474, when the author entertained us with the suggestion that toasted bread and items such as the 'beloved *braaiwors*' must seriously be considered as causes of cancer, not only of the stomach but also of the sex organs and other organs.

In so far as Professor Steyn relies on his unpublished reference No. 41, entitled *Caffeine-Containing Beverages and Human Health*, for his statements about cancer, I must assume that he includes the claim I heard him make at an official conference on this subject as recently as December 1953, when he attributed to caffeine-containing cold drinks a capacity to convert duodenal peptic ulcers into malignant ulcers.

It is trite medicine that malignant changes in duodenal peptic ulcers are so rare as to be almost unheard of.

4. The whole section on 'Allergic Disorders' on p. 743 is based on Professor Steyn's self-medication in his own case, together with his results in an unstipulated number of 'patients' treated by him with an undisclosed diet.

At no stage does the author reveal any evidence of controlled experiments in the assessment of the alleged therapeutic response; nor does he show any awareness of the possible role of psychological factors in his own case or in the other cases of migraine, hay fever or allergic skin conditions he elected to treat.

H. A. Shapiro

P.O. Box 30  
Cape Town  
10 March 1954

#### TOXICITY IN CHILDREN OF BORIC ACID AND ASPIRIN

*To the Editor:* In the Editorial of 27 February 1954 (28, 161), you warned against the use of teething powders containing mercury.

There are 2 other drugs, both commonly considered innocuous, which have proved poisonous to infants: viz. Boric Acid<sup>1</sup> and Aspirin<sup>2</sup>. Boric acid, applied as a dusting powder, has given rise to intoxication by percutaneous absorption, as evidenced by cutaneous erythema, diarrhoea, vomiting, dehydration, opisthotonus, irritability and sometimes convulsions. Several cases have been fatal.

Salicylate intoxication is encountered frequently in paediatric practice in Johannesburg. The majority of the cases give a history of having been treated for diarrhoea with mixtures containing sulphonamides and  $\frac{1}{2}$  gr. of aspirin per single dose. These mixtures have been administered for 2-3 days, when symptoms of a severe acidosis appear. Diarrhoea and restriction of fluid-intake favour the accumulation of salicylate in the blood, and levels of 70-80 mg. per 100 ml. have been observed in some of the patients admitted here. Response to intravenous therapy is poor.

The morbidity and mortality in infancy can only increase by the use of mercury, boric acid and aspirin, and no harm would result if these drugs were never used in patients under 2 years of age.

E.K.

Johannesburg.

#### REFERENCES

1. Goldbloom, R. B. and Goldbloom, A (1953): *Pediat.*, 43, 631.
2. Editorial (1953): *Ibid.*, 42, 276.

Schering

PRANTAL

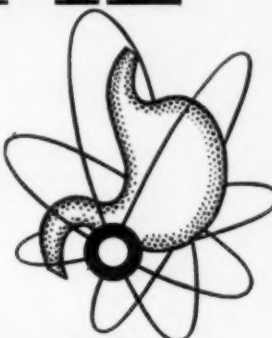


selective anticholinergic

**PRANTAL**

Methylsulphate

*for peptic ulcer*



*unparalleled specificity*

*hitherto unobtainable freedom from side effects*

*wider flexibility of dosage permitted*

*reduces gastric acidity and motility*

*relieves pain*

**PRANTAL\*** Methylsulphate is a member of an entirely new class of synthetic anticholinergic compounds. It curbs excessive vagal stimuli to the stomach by inhibiting synaptic transmission across parasympathetic ganglia.

Because of its selective action, doses which reduce gastric motility and secretion rarely cause dilatation of the pupils, dryness of the mouth, urinary retention or constipation.

Studies by leading clinical investigators have confirmed the value of the unusual properties of PRANTAL in treatment of the peptic ulcer syndrome.

**Average Dosage:** One tablet (100 mg.) four times daily.

**Packaging:** PRANTAL Methylsulphate (brand of diphenmethanil methylsulphate), 100 mg. scored tablets, bottles of 30 and 100.

\*Reg. Trade Mark

Manufactured in the Union of South Africa by

**SCHERAG (PTY.) LIMITED P.O. Box 7539 JOHANNESBURG**  
for, and under the formula and technical supervision of

Schering

**CORPORATION • BLOOMFIELD, N.J.**



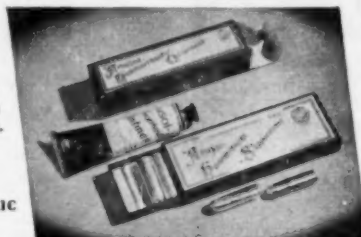
## ANUSOL Haemorrhoidal Suppositories

\* TRADE MARK REGD.

Anusol\* are probably the best known and most widely prescribed rectal suppositories. They relieve pain safely in haemorrhoids and uncomplicated inflammatory rectal states, by the removal of pressure on nerve endings through effective decongestive action; the nerves are not anaesthetized and continue to give warning of more serious pathology. The same decongestive action reduces extravasation of blood without the use of styptics, haemostatics or vasoconstrictors.

Available in boxes of 12 suppositories.  
Anusol is also available in Ointment form.

**INDICATIONS.** For non-surgical treatment of haemorrhoids that are still amenable to palliative therapy; where surgery is inadvisable as in pregnancy; when operation is refused. For pre- and post-operative care.



NO WARNER PREPARATION HAS EVER BEEN ADVERTISED TO THE PUBLIC

WM. R. WARNER & COMPANY (PTY) LTD., 6-10 Searle Street, Capetown.

132 Bx



# Oxygenaire

[South Africa] (Pty.) Ltd.

## THE "OXYAIR" FACE MASK

THE "OXYAIR" FACE MASK, WHICH HAS BEEN INTRODUCED INTO THE FIELD OF OXYGEN THERAPY BY OXYGENAIRE, HAS A THIN MOULDED FACEPIECE OF TRANSLUCENT PLASTIC. IT INCORPORATES A GAUZE VENTILATION HOLE, RESERVOIR BAG, A SMALL BORE PLASTIC TUBE FOR OXYGEN SUPPLY, AND THE WHOLE HAS ELASTIC SUSPENSION.

THE GAUZE-COVERED VENTILATION HOLE PROVIDES A MINIMUM RESISTANCE TO BREATHING AND ALSO CREATES A TURBULENCE WHICH IS AN ADVANTAGE AT HIGH INSPIRATORY AND EXPIRATORY FLOW. THE CONNECTION OF THE RESERVOIR BAG ON TO THE MASK IS SO DESIGNED AS TO AVOID ANY POSSIBILITY OF CLOSURE OF THE NECK OF THE BAG WHEN THE PATIENT IS IN A RECLINING POSITION. SHOULD THE OXYGEN SUPPLY FAIL, THE LOW RESISTANCE OF THE VENTILATION HOLE ENSURES ADEQUATE SUPPLY OF AIR. THE OVERALL WEIGHT OF THE MASK IS 2 OZ.

FURTHER PARTICULARS MAY BE OBTAINED FROM:

Enquiries:

53 Third Street, Bezuidenhout Valley, Telephone 24-6936, Johannesburg

## *A perfect source of Vitamin C*

**RIBENA (*Syrupus Ribis Nigri B.P.C.*)**

**HIGH CONCENTRATION OF VITAMIN C — REMARKABLE STABILITY**

**Four characteristics of Ribena make it a perfect source of Vitamin C:**

- 1 It contains a high concentration of Vitamin C — and it is very stable.
- 2 The vitamin is in its natural state.\*
- 3 Ribena is very well tolerated even by sensitive stomachs. It is completely free from all cellular structure. It is suitable for infants almost from birth, for peptic ulcer cases, and for women suffering from "morning sickness"; they can take it when almost everything else increases discomfort.
- 4 In addition to its therapeutic values, it is delicious in its own right as sweet blackcurrant syrup.

\* Following reports of unsatisfactory response to the therapeutic use of synthetic ascorbic acid in peptic ulcer cases, controlled tests using Ribena were instituted at various large British hospitals, with striking results.

Clinical experience has also shown that in ulcerative gingivitis, the routine use of Ribena as an adjunct to local therapy has given more satisfactory results than that of the synthetic vitamin.

The superiority is presumably due to the presence of other factors of the Vitamin-C complex, possibly the Vitamin P, as well as mineral elements.

### **Therapeutic uses**

Ribena is recommended for all conditions requiring Vitamin-C implementation: namely, as a natural and rapid restorative from fatigue; for increasing resistance to local infection and colds; for expectant and nursing mothers; for infants from birth; for children and adolescents; in many dental conditions; in peptic ulcer cases; in fractures and wounds; in blood dyscrasias and hæmorrhagic states; in infections and fevers; and in many skin disorders.

### **Reports for doctors overseas**

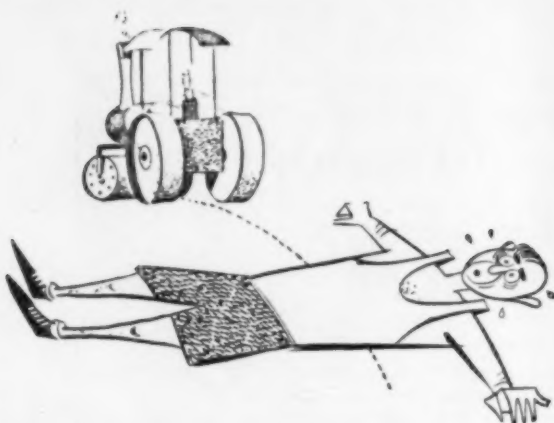
The makers of Ribena co-operated extensively with the Ministries of Food and Health during the war, a co-operation which still goes on to some extent even now. The Royal Forest Factory has attached to it a series of very fine laboratories where research into fruit juices and vitamins is conducted to an academic level, under the direction of an expert lately in charge of the Fruit Products Section of the University of Bristol Agricultural Research Station. Reports of much of the work done are available, on application, to doctors and scientists overseas. These are likely to be of particular interest now that Ribena is being extensively exported.

**Send for further information.** A booklet entitled "Blackcurrant Juice in Modern Therapy: Natural Vitamin C" will be forwarded to you with pleasure; also details of a number of controlled tests made on the use of Vitamin C, if you will write to:—

Technical Director & Chief Chemist,  
**H. W. CARTER & CO., LTD.,**  
The Royal Forest Laboratory,  
Coleford,  
Gloucestershire, England.

**Ribena** VITAMIN C

*Please Support Our Advertisers — Ondersteun Asseblief Ons Adverteerders*



## When the patient is feeling **FLAT...** **VITASAN**

During convalescence, and states of physical exhaustion, Vitasan will be found most useful. The small strychnine content proves an effective "appetizer" in anorexia and the wine base ensures "patient-acceptance".

### Each fluid ounce of Vitasan contains:

Thiamine Hydrochloride	4 Mgm.
Nicotinamide	20 Mgm.
Strychnine Hydrochloride	2 Mgm. (1/32 grain)
With Glycerophosphates and adjuvants.	

Bottles of 6 oz. — 16 oz. — 80 oz.

Manufactured in South Africa by



Established 1942

CAPE TOWN  
P.O. Box 38

DURBAN  
113, Umbilo Road

SALISBURY  
P.O. Box 2238

JOHANNESBURG  
P.O. Box 5785

P.26.

## THE WELLCOME FOUNDATION LIMITED

*The Wellcome Foundation Limited invites applications for the  
position of Head of the Biological Division.*

### THE WELLCOME RESEARCH LABORATORIES Beckenham

The Division is engaged on research in immunology, bacteriology, virology and biochemistry in both medical and veterinary fields and is also responsible for the production of antitoxins, prophylactics, vaccines and bacteriological diagnostic reagents. The Head will be required to direct and co-ordinate the activities of the various Departments, each of which is in the charge of a highly qualified and experienced scientist. The position involves considerable responsibilities, primarily of a scientific character. Candidates should be medically qualified and have had research experience in a senior capacity in one of the subjects named.

Applications should be addressed to *The Research Director,  
The Wellcome Research Foundation Limited, 183-193,  
Euston Road, London, N.W. 1.*

### THE NATAL MOTOR INDUSTRY HEALTH FUND

The Natal Motor Industry Health Fund wishes to appoint a medical practitioner to work on its behalf in the Verulam area. Further details may be obtained from, and applications should be submitted to the Secretary, P.O. Box 2838, Durban.

### MEDICAL PRACTITIONER FOR MEDICAL BENEFIT SOCIETY

Applications are invited from registered medical practitioners for the above post. Medical Officers will be required to provide consultation and domiciliary services for Non-European members. The capitation fee will be 14s. per member per annum. All information may be obtained from the Secretary. Closing date for applications 3 April 1954.

Reply to: P. Abrahams, 15 Halkett Road, Kimberley.

### LOCUM REQUIRED

Locum required for Copper Mine in Northern Rhodesia near Kitwe for five months from 17 May to 23 October, 1954. Salary at the rate of £120 per month plus free house and car. Apply Dr. Keays, P.O. Box 383, Kitwe, Northern Rhodesia.

### FOR SALE

Country practice, including appointments, in Northern Transvaal. Write stating age, marital state, qualifications, experience and whether bilingual, to 'A.U.T.', P.O. Box 643, Cape Town.

## Die Mediese Vereniging van Suid-Afrika The Medical Association of South Africa

AGENTSAP-AFDELING : AGENCY DEPARTMENT

KAAPSTAD : CAPE TOWN

Posbus 643, Telefoon 2-6177: P.O. Box 643, Telephone 2-6177

(1596) Kaapse Middellande, Hospitaaldorp. Goedgevestigde eenmanspraktyk. Totale Bruto Ontvangste: 1952 ± £2,300, 1953 ± £2,430. Prys vir klandisiewaarde £750 en vir medisyne, meubels en instrumente £250.

(1437) Prescribing cash practice in Transkei 90% native, near sea. Gross takings over £2,000 p.a. Little night or week-end work, definite scope for expansion. No surgery and little maternity done. Surgery for hire at £5 p.m. Owner going overseas and prepared to sell at £600 for quick cash sale.

(1457) Goed gevestigde WESTELIKE PROVINSIE praktyk. NETTO INKOMSTE oorskry £3,000 per jaar. Huis beskikbaar. Verband kan gereël word. Volle besonderhede op aanvraag.

(1530) Karoodorp. Eenmanspraktyk sonder opposisie. Gemiddelde inkomste £2,000 p.j. Premie verlang £700. Huis te huur teen £8 p.m. D.S. aanstelling.

(1606) Near CAPE TOWN. Excellent nucleus with cash takings already £1,409 p.a. 2 Small appointments. Rental surgery £10 p.m. Premium for goodwill £750. Terms available. Definite scope for expansion.

### ROOMS AVAILABLE TO SHARE

(1422) Cape Town. Waiting room and examination room available in St. George's Street building. (Quote also 1579 and 1618).

### ASSISTENTE/PLAASVERVANGERS VERLANG ASSISTANTS/LOCUMS REQUIRED

(1554) S.W.A. Assistant urgently required with view to partnership. Salary £80 per month plus all found. Scope for surgery.

(1553) Transkei. Assistant as soon as possible for 6 or 12 months. Salary £80 p.m. Car not essential. (Quote also 1458).

(1427) Natal. Assistant as soon as possible. Salary etc. to be arranged.

(1564) Cape Town suburban practice. Locum/Assistant required. Salary to be arranged also period of service.

(1576) East Griqualand partnership practice. Locum/Assistant for May, June and July. Salary offered £75 per month plus all found and an extra £5 a week during the time he acts as locum tenens. Car could be provided, but if own car is used, petrol and oil allowance will be made. 90% Native practice with D.S. appointment.

(1603) Western Province long term assistantship from ± end of March for 6 months or longer.

(1598) Cape Town Suburb. Locum for 2½ months from ± April 25. Salary £3 3s. p.d. Car not essential.

### INSTRUMENTS FOR SALE

(1508) (a) One Cambridge Portable Electrocardiograph in excellent condition, £100 or nearest offer. (b) One portable pneumothorax refill apparatus, bottle type. £15 or nearest offer.

### JOHANNESBURG

Medical House, 5 Esselen Street. Telephone 44-9134-5, 44-0817  
Mediese Huis, Esselenstraat 5. Telefoon 44-9134-5, 44-0817

### PRAKTYKE TE KOOP/PRACTICES FOR SALE

(Pr/S108) Transvaal. Goedgevestigde, winsgewende praktyk met aanstellings. Die volle praktyk kan oorgeneem word of 'n vennootskap (volle helfte aandeel) of 'n assistentskap met oog op vennootskap. Die assistent sal verwag word om dan na 3 maande 'n vennootskap te koop. (Die assistent se salaris sal £110 p.m. wees, plus vry petrol en olie en £15 tot £20 p.m. kartoelae.) Die gemiddelde bruto-inkomste van die praktyk is £7,000/£8,000 per jaar en die netto is ongeveer £5,000 p.j. Premie verlang is £2,500 vir 'n vennootskap en £4,000 vir die volle praktyk. Baie billike terme sal gereël word.

(Pr/S109) Transvaal hospital town. Well-established practice with two transferable appointments. Annual income well over £3,500. It is a mixed general practice, and the native side could be considerably expanded. Surgery is undertaken. Practice most suitable for two doctors. The owner will consider an outright sale at a premium of £2,250 and a deposit of £500 or a PARTNERSHIP at a premium of £1,000, on terms. Buyer must have an excellent knowledge of Afrikaans. Will suit doctor interested in surgery and/or gynaecology.

### ROOMS TO LET

Johannesburg. Consulting room and waiting room and receptionist's services to share with medical man. Medical block, centre city. Rooms to share with general practitioner in northern suburbs.

Specialist doing post-graduate study overseas will have consulting/waiting and examination room vacant during May, June and July in central city medical building. Rental £17 10s. per month.

### LOCUMS REQUIRED/PLAASVERVANGERS BENODIG

(L/V538) Vennootskapspraktyk in Transvaalse dorp. Plaasvervanger vir April en Mei. Salaris £3 3s. per dag.

(L/V539) Partnership practice in Transvaal. Locum for April and May. Salary £80 p.m. free board and lodging and 1s. per mile travelling allowance.

(L/V540) Near Johannesburg. Locum for June and July. Terms: £3 3s. per day and accommodation.

(L/V544) Locum required for East Rand Mine, as from 5 April till 6 June. Must be a single man. Locum required for West Rand Mine, as from 1 July till end September. Single man.

### DURBAN

112 Medical Centre, Field Street. Telephone 2-4049

### PRACTICE FOR SALE

(PD24) Natal South Coast. Practice suitable for doctor who does not want full-time work. £250 for drugs, dressings, instruments, etc. No charge for goodwill. Small house on ½ morgen, £1,600. Immediate occupation.

### LOCUMS URGENTLY REQUIRED

LOCUM REQUIRED NATAL SOUTH COAST AS SOON AS POSSIBLE FOR APPROXIMATELY ONE MONTH. £2 12s. 6d. per day, all found. Mixed general practice, about 80% non-European. Not much travelling, very few night calls and only minor surgery.

WARTBURG, NATAL. LOCUM FOR THREE WEEKS FROM 1 MARCH. £2 12s. 6d. per day, all found, plus car allowance. Mixed country practice.

### ASSISTANTS/LOCUMS REQUIRED

CAMPERDOWN, Natal. Locum from about 25 March for one month. £2 12s. 6d. per day, all found. Car provided, if necessary.

PIETERMARITZBURG. Locum from about 27 March until 16 April. £2 12s. 6d. per day, all found. Car allowance.

ZULULAND. Locum from about 15 May for six weeks. £3 5s. per day, free board and lodging, and £10 per month car allowance. Assistant required in general mixed practice near Durban. Junior partnership offered after preliminary trial period. Full details on request.

Assistant required for trial period. If suitable partnership will be offered. General practice in select area approximately 20 miles from Durban.

### ROOMS TO SHARE

Durban. Share furnished consulting and examination room, waiting room and services nurse receptionist and bookkeeper, in a modern West Street building. Write to 'A.U.R.', P.O. Box 643, Cape Town.

### REGISTERED SPECIALIST OBSTETRICIAN AND GYNAECOLOGIST REQUIRED URGENTLY

Assistant with view to partnership in large practice.

Write, giving full details of experience, qualifications, marital status etc., to 'A.U.N.', P.O. BOX 643, CAPE TOWN.

**IMPORTANT NOTICE**

Medical practitioners who intend applying for any appointment specified in this notice for which an advertisement appears in this issue of the Journal are advised to communicate first with the Honorary Secretary of the Branch of the Medical Association of South Africa concerned:

**Appointment:** Johannesburg Municipal Employees' Sick Benefit Society, Full-time Medical Officer.

**Branch:** Southern Transvaal Branch, Medical House, 5, Esselen Street, Johannesburg.

**Town Council of Brakpan****VACANCY: DEPUTY MEDICAL OFFICER OF HEALTH**

Applications are invited from bilingual persons under 45 years of age for appointment to the undermentioned position. The successful applicant will be required to serve a probationary period of six months and, on confirmation of appointment will be required to join the Joint Municipal Pension Fund. The appointment will also be subject to a medical test of good health. In addition to the salary a variable cost-of-living allowance will be paid as follows: Married men at present £26 16s. 8d. per month; single persons according to the statutory rules (at present £14 14s. 8d. per month) and a locomotion allowance of approximately £10 per month, and the successful applicant will have to provide his/her own motor car.

The commencing notch on the salary grade will not necessarily be the minimum of the grade, but depending upon qualifications and experience, the appointment may be on a higher notch.

The duties attached to this post will be such as are allotted to the incumbent from time to time, and will include administrative public health duties, the conduct of the Council's ante-natal, post-natal, child welfare, tuberculosis and venereal diseases clinics for Europeans and non-Europeans, and the examination of native males before the registration of service contracts.

Applications stating age, experience and qualifications must be submitted on the official form obtainable from the Town Clerk's General Office, and must reach the Office of the Town Clerk, Municipal Offices, Brakpan, not later than 12 noon, Friday, 2 April 1954.

Canvassing for appointment either directly or indirectly will disqualify a candidate.

W. P. Dornmehl  
Town Clerk

Notice No. 14  
Municipal Offices  
Brakpan  
26 February 1954

**PUBLIC HEALTH DEPARTMENT****DEPUTY MEDICAL OFFICER OF HEALTH**

Salary scale: £1,000 x 50—£1,200 per annum.

Applicants must be registered with the S.A. Medical and Dental Council as general practitioners, and be in possession of a Diploma in Public Health or similar qualification.

(A1839)

**ASSISTANT WANTED**

Mixed practice Bulawayo. State sex, experience, marital state, when available, salary required. Accommodation available. Apply 35 Fifth Avenue, Bulawayo.

**Basutoland Government****VACANCIES FOR MEDICAL OFFICERS**

Applications are invited from registered medical practitioners for the above pensionable posts on a salary scale of £865: 865 : 935 x 35 — 1,005 x 45 — 1,140 x 45 — 1,320. Cost of living allowance is payable; the present rates are:

**Married Officers:** on the first £800 of salary—12½%; on the remaining salary—7½%. Maximum £132 per annum.

**Single Officers:** One half of the above rates, subject to a maximum of £66 per annum.

Rental deduction of 10% of salary for furnished quarters.

Medical Officers are required for general medical duties. A knowledge of practical surgery will be an advantage. Private practice is at present allowed but is subordinate to official duties. Increments will be given on first appointment for war service and approved professional experience.

One Medical Officer is required for full time duties as Medical Officer of Schools and Health. An allowance of £150 per annum in lieu of private practice will be granted and additional increments will be given to a successful candidate with a Diploma in Public Health.

Subject to the exigencies of the service six weeks accumulative vacation leave and two weeks non accumulative occasional leave is granted each year. Overseas leave passage allowance for officer, wife and proportionate allowance for children every three years.

Further particulars and forms of application may be obtained from the Director of Medical Services, Maseru, Basutoland.

**Vacancies for Temporary Relief Medical Officers**

Applications are invited from registered medical practitioners for appointment to posts of Temporary Relief Medical Officers. The salary attached to these posts is:

£620 per annum—Less than four years experience after registration.

£780 per annum—Less than six years experience after registration.

£820 per annum—Six years but under eight years experience after registration.

£860 per annum—At least eight years experience after registration.

In addition to the above salary a cost of living allowance is payable at rates prescribed from time to time by the Administration. The present rate is £320 per annum for married persons and £100 per annum for single persons.

Applicants should submit their applications on the prescribed application form T.A. 633, which is obtainable from the Provincial Secretary, Hospital Services Branch, P.O. Box 2060, Pretoria, or from the Medical Superintendent of any Public Hospital in the Transvaal.

Applications should obtain full particulars as to the age, professional and academic and language qualifications, experience and conjugal status of the applicant and should further indicate the earliest date upon which duties can be assumed. Copies, only of recent testimonials, should be attached.

Applications must be submitted in duplicate and be addressed to the Medical Director of Hospitals, P.O. Box 2060, Pretoria, and must reach his office not later than 4 p.m. on 5 April 1954.

(44645)

**University of Cape Town  
REFRESHER COURSE IN ANAESTHESIA**

A Refresher Course in Anaesthesia, designed to Supplement the needs of the General Practitioner, is being arranged. The course, extending over the period 12 April to 15 April 1954, will provide lectures and demonstrations in anaesthesia and immediately-related subjects.

The provision of the course will depend upon the number of intending participants and any General Practitioner who is interested in attending the whole or part of the course, should apply for details to:

The Registrar,  
University of Cape Town,  
Private Bag,  
Rondebosch, C.P.

## Provincial Administration of the Cape of Good Hope

### HOSPITALS DEPARTMENT

#### HOSPITAL BOARD SERVICE: VACANCIES

1. Applications are invited for the following vacant posts:

Institution	Post	Emoluments	Closing date	Applications must be addressed to
Frere Hospital, East London	Medical Practitioner, Grade A. (Anaesthetist)	£500-600-660-720 p.a.	2.4.54	The Medical Superintendent, Frere Hospital, East London.
Groote Schuur Hospital, Observatory, Cape	Technician, Grade B. (E.E.G.-Radiological Department)	£500x25-650 p.a.	16.4.54	The Director of Hospital Services, P.O. Box 2060, Cape Town.

2. The conditions of service are prescribed in terms of Hospital Board Service Ordinance No. 19 of 1941, as amended, and the regulations framed thereunder.

3. In addition to the scale of salary indicated a cost of living allowance at rates prescribed from time to time by the Administrator is payable to whole-time officials and employees.

4. Candidates for the post of Technician, Grade B, must be qualified Radiographers and must be able to perform Electro-Encephalographic duties.

5. The successful candidates, if not already in the Hospital Board Service, will be required to submit satisfactory birth and health certificates.

6. Application must be made on the prescribed form (Staff 23) which is obtainable from the Director of Hospital Services, P.O. Box 2060, Cape Town, or from the Medical Superintendent of any Provincial Hospital or Secretary of any School Board in the Cape Province.

7. Candidates must state the earliest date on which they can assume duty.

(M127030)

## OCEAN VIEW PRIVATE HOSPITAL

We have pleasure in announcing the opening of the OCEAN VIEW PRIVATE HOSPITAL previously run as the GLENHILDUR NURSING HOME, SEA POINT. This Home has been completely renovated and modernly equipped, whilst within the next six weeks a modern well equipped theatre will be at the disposal of the medical profession.

### TARIFF

Private Ward ... ..	£2 12 6 per day
Semi-Private Ward ... ..	£2 2 per day
3-bedded Ward ... ..	£1 17 6 per day
5/6-bedded Ward ... ..	£1 10 per day

## OCEAN VIEW PRIVATE HOSPITAL

259 HIGH LEVEL ROAD, SEA POINT

'Phones: 4-6209 and 4-8095

## Provinsiale Administrasie van die Kaa die Goeie Hoop

### HOSPITAALDEPARTEMENT

#### HOSPITAALRAADSDIENS: VAKATURES

1. Aansoeke word ingewag om die volgende vakante poste:

Inrigting	Pos	Emolumente	Sluitings- datum	Aansoeke moet gerig word aan
Frere-hospitaal, Oos-Londen	Geneesheer, Graad A. (Narkotiseur)	£500-600-660-720 p.j.	2.4.54	Die Mediese Superintendent Frere-hospitaal Oos-Londen.
Groote Schuur-hospitaal, Kaap	Tegnikus, Graad B. (E.E.G.-Observatory, Radiologiese Departement)	£500x25-650 p.j.	16.4.54	Die Direkteur van Hospitaal-dienste, Posbus 2060, Kaapstad.

2. Die diensvoorwaardes word voorgeskryf ingevolge die Ordonnansie op Hospitaalraadsdiens nr. 19 van 1941, soos gewysig, en die regulasies wat daarkragens opgestel is.

3. Benewens die salarisskaal soos aangedui is 'n lewenskoste-toelae betaalbaar aan volttydse beamptes en werknemers teen bedrae wat van tyd tot tyd deur die Administrateur vasgestel word.

4. Kandidate vir die pos van Tegnikus, Graad B, moet gekwalifiseerde Radiograwe wees en moet in staat wees om Electro-Encephalografiese dienste te verrig.

5. Die geslaagde kandidaat, indien nie reeds in die Hospitaalraadsdiens nie, moet bevredigende geboorte en gesondheid-sertifikaat indien.

6. Aansoek moet gedoen word op die voorgeskrewe vorm (Staf 23) wat verkrygbaar is by die Direkteur van Hospitaaldienste, Posbus 2060, Kaapstad, of by die Mediese Superintendent van enige provinsiale hospitaal of by die Sekretaris van enige Skoolraad in die Kaapprovinsie.

7. Kandidate moet die vroegste datum meld waarop hulle diens kan aanvaar.

(M127030)

## Conradie Hospital, Pinelands

### VACANCY: HONORARY MEDICAL OFFICER (GENERAL PRACTITIONER)

Applications are invited from registered medical practitioners who are under the age of sixty years for appointment to the post of Honorary Medical Officer on the staff of the Conradie Hospital, Pinelands.

The appointment will be for the period ending 31 December 1956, and in all other respects is subject to the Hospitals Ordinance No. 18 of 1946 (Cape), as amended, and to the regulations framed thereunder.

Applications, stating age, qualifications and experience, should be addressed to the Medical Superintendent, Conradie Hospital, Pinelands, to reach his office not later than noon on Saturday, 3 April 1954.

(1756)

## Conradie-Hospitaal, Pinelands

### VAKATURE: ERE-MEDIESE BEAMPTTE (ALGEMENE PRAKTISYN)

Aansoeke word ingewag van geregistreerde geneesheer onder die ouderdomsgrens van sestig jaar vir aanstelling in die betrekking van Ere-Mediese Beampte by die Conradie-Hospitaal, Pinelands.

Die aanstelling sal vir die tydperk eindigende 31 Desember, 1956, geldig wees, en sal in alle ander opsigte geskied ingevolge die Kaapse Ordonnansie op Hospitale, nr. 18 van 1946, soos gewysig, en die regulasies daarvolgens opgestel.

Aansoeke, waarin ouderdom, kwalifikasies en ondervinding gemeld word moet aan die Mediese Superintendent, Conradie-Hospitaal, Pinelands gerig word om hom te bereik nie later nie as middag, 3 April 1954.

(1756)

## Vacant District Surgeoncies

Applications for the undermentioned District Surgeoncies accompanied by full particulars as to date and country of birth, qualifications, experience and previous and present appointments of the applicants and the earliest date on which they can assume duty, if appointed, should reach the Secretary for Health, P.O. Box 386, Pretoria, not later than 31 March 1954. Testimonials (copies) may be submitted, but the Minister of Health wishes it to be known that any candidate will be regarded as disqualified who directly or indirectly canvasses for appointment.

The appointments are on a part-time basis and private practice is not precluded.

Applicants should state whether they have a knowledge of both official languages, also whether they are competent to diagnose leprosy and venereal diseases and to use the modern intravenous and other therapeutic technique in the treatment of venereal disease. Applicants should also state whether they have any experience as a medical officer of health or in any similar capacity. If more than one post is applied for a separate application should be submitted in respect of each.

Place	Salary per annum	Drug allowance per annum
CAPE PROVINCE	£	£
Brandvlei	250	30
Danielskuil	250	25
Dordrecht	335	75
Hanover	280	50
Komga	210	20
Pearston	200	25
Richmond	200	35
Ugie	180	20
Villiersdorp	90	20
Rhodes	350	25
TRANSVAAL		
Alldays	350	25
Devon	200	30
Groothoek	310	25
Koster	470	75
Thabazimbi	500	60
ORANGE FREE STATE		
Steynsrus	275	50
Verkeerdevlei	250	40
Virginia	120	25

The salaries cover all ordinary and routine services but travelling allowance of 1s. per mile for all mileage travelled outside a radius of three miles from head-quarters, night detention at 15s. and supplementary fees for certain other services will be payable also fees for attendance at courts and inquests in accordance with the tariff of the Department of Justice.

Forms of application and copy of draft agreement will be furnished on application.

(44612)

## Johannesburg Municipal Employees' Sick Benefit Society

### FULL-TIME MEDICAL OFFICER

Applications are invited from fully qualified general practitioners to fill a position with the above Society on the following conditions:

A full-time Medical Officer to visit certain Municipal Depots between 8.30 a.m. to 4.30 p.m. on week days and 9 a.m. to 11 a.m. on Saturdays.

There will be no domiciliary calls and no Sundays, holidays or night work.

The salary offered is £1,000 per annum plus £200 per annum locomotion allowance.

Further details will be furnished on application.

Applications must reach the Secretary, 4th Floor, P.F.A.C. Buildings or P.O. Box 2626, Johannesburg, by 10 April 1954.

P. J. Uys  
Secretary

23 February 1954

## Vakature vir Besoekende Mediese Beampte (Deeltyds)

### LYDENBURGSE TERINGHOSPITAAL

Aansoek om aanstelling in ondergenoemde betrekking in die minstens drie jaar in die Unie van Suid-Afrika of Suidwes-Afrika gekwalifiseerde kandidaat ingewag.

Betrekking	Besoldiging aan betrekking verbonde	Pligte
Mediese Beampte (deeltyds)	£100 per jaar (insluitend)	Behandel teringpasiente 3 uur per week. Kan na ses maande hersien word.

Kandidate moet Suid-Afrikaanse burgers of burgers van 'n Statebondslan of die Republiek Ierland en tweetalig wees en moet minstens drie jaar in die Unie van Suid-Afrika of Suidwes-Afrika gewoon het.

Registrasie by die Suid-Afrikaanse Mediese en Tandheelkundige Raad is 'n noodsaaklike vereiste vir aanstelling in die betrekking.

Van die aangestelde persoon sal verwag word om op te tree as deeltydse Mediese Superintendent van die Lydenburgse Tering-hospitaal waar hy die enigste Mediese Beampte sal wees.

Daar moet aansoek gedoen word op die voorgeskrewe vorms (Z.83 en SDK. 8(a)) wat van die Sekretaris van Gesondheid, Posbus 386, Pretoria, verkrygbaar is.

Die sluitingsdatum vir die ontvangs van aansoek is 31 Maart 1954.

(44613)

### PRACTICE FOR SALE

Practice for sale at Boshof. Price very reasonable. Excellent prospects. For full details address enquiries to:

C. G. Marais & Co.

P.O. Box 38  
Telephones 3 and 70  
Boshof

### RECEPTIONIST

Able young lady seeks position as doctor's receptionist in City or suburbs. Mornings only. Phone 7-4005.

## Ndola Municipal Council

### APPOINTMENT OF MEDICAL OFFICER OF HEALTH

Applications are invited from persons who possess the Diploma in Public Health and have had experience in a similar appointment. Salary grade £1,700 x £100—£2,200 per annum, plus a temporary variable cost-of-living allowance of £312 per annum.

Intending applicants should apply forthwith for further particulars.

Edward C. Barlow  
Town Clerk

P.O. Box 197  
Ndola  
Northern Rhodesia

(3514)

### PARTNERSHIP OFFERED

To F.R.C.S. who is willing to join General Practitioner. This is a well established and very extensive practice in hospital town. Ample scope for major surgery. Must have previous G.P. experience and be bilingual. Three months Assistantship, thereafter partnership offered if acceptable to both parties concerned. Write full particulars to 'A.U.S.' P.O. Box 643, Cape Town.

**penicillin  
without  
tears**



Children fear injections. There is increasing evidence that they (and adults) may be spared parenteral penicillin and be given it by mouth with equal therapeutic effect.

For infants, injections entail disturbance and handling. It is now accepted that for them, the administration of penicillin by mouth is the method of choice.

'Eskacillin' is the ideal oral penicillin for infants and children. It is liquid and may be given simply by teaspoon or mixed with the infant's feed; and it is palatable so that even recalcitrant children take it willingly and without fuss.

**'ESKACILLIN'**  
**50 + 100**

**the palatable liquid oral penicillin**

'Eskacillin' is available in two strengths.

'Eskacillin' 50 containing 50,000 I.U.

penicillin per medical teaspoonful; and

'Eskacillin' 100 containing 100,000 I.U.

penicillin per medical teaspoonful.

Issued in 2 fl. oz. bottles.

**M. & J. PHARMACEUTICALS (PTY.) LIMITED, DIESEL STREET, PORT ELIZABETH**

(Associated with Menley & James, Limited, London)

ECP1125A

for Smith Kline & French International Co., owner of the trade mark 'Eskacillin'

## A GUIDE TO THE CHARACTERISTICS &amp; USES OF



# Insulin Preparations

In addition to the well-established preparations — Soluble Insulin, Protamine Zinc Insulin and Globin Insulin (with Zinc) — Boots range of insulin products includes Isophane Insulin, which is now so popular in the U.S.A., and the

three Insulin Zinc Suspensions of the 'lente' type developed by Hallas-Møller and his colleagues in Denmark.

The table below gives an indication of their various characteristics and uses.

DESCRIPTION	APPROXIMATE DURATION OF ACTION (HRS.)	CHARACTERISTICS AND USES	STRENGTHS & PACKS	
			UNITS PR/ML.	ML PER VIAL
<b>INSULIN (Soluble Insulin)</b> The Purified and crystallized anti-diabetic principle of the pancreas. (pH 3).	6	Quick acting. Particularly useful for "brittle" diabetics and patients with large daily insulin requirements who cannot be satisfactorily controlled with sustained-acting preparations.	20 40 80	5,10 5,10 5,10
<b>PROTAMINE ZINC INSULIN (P.Z.I.)</b> An insoluble complex formed by insulin with protamine and zinc. (pH 6.7-7.3).	24-48	A well-tried insulin with a prolonged action. A single daily injection is capable of giving satisfactory control in most patients with moderate insulin requirements.	40 80	5,10 5
<b>GLOBIN INSULIN WITH ZINC</b> A soluble preparation of insulin with globin and a trace of zinc chloride. (pH 3.0-3.2)	18-24	Intermediate in action and suitable for some diabetics whose fasting (night-time) blood-sugar is normal, but who require insulin action during the day.	40 80	5 5
<b>ISOPHANE INSULIN (N.P.H.)</b> A protamine-zinc-insulin complex adjusted to contain no excess of protamine. (pH 7.3 approx.)	26-30	An insulin with prompt yet sustained action; popular in U.S.A. Particularly useful for diabetics who otherwise have to mix P.Z.I. with soluble insulin. Miscible with soluble insulin without causing further precipitation.	40 80	10 10
<b>INSULIN ZINC SUSPENSION (AMORPHOUS)</b> <b>(Insulin Semilente)</b> A suspension of amorphous particles of an insulin and zinc complex which is insoluble in acetate buffer at the pH of blood (pH 7.1-7.3).	12-16	An insulin of intermediate action more rapid than that of insulin zinc suspension. Chiefly used for mixing with I.Z.S. when an even more rapid onset of action is needed.	40	10
<b>INSULIN ZINC SUSPENSION (Insulin Lente)</b> A mixture of crystalline and amorphous particles of an insulin + zinc complex insoluble in acetate buffer at the pH of blood (pH 7.1-7.3).	24+	Prompt but sustained action; suitable for most diabetics, including those who otherwise need mixtures of P.Z.I. and soluble insulin (cf. Isophane Insulin). Miscible with I.Z.S. (Amorphous) but not with soluble insulin.	40 80	10 10
<b>INSULIN ZINC SUSPENSION (CRYSTALLINE)</b> <b>(Insulin Ultralente)</b> A suspension of a crystalline insulin-zinc complex insoluble in acetate buffer at the pH of blood (pH 7.1-7.3).	30+	A prolonged-acting insulin suitable for use when some overlap of the action of the previous day's insulin injection is desired.	40	10

Literature and further information from

**B.P.D. (S.A.) (PTY.) LIMITED**

P.O. Box 45, Jeppestown, Transvaal